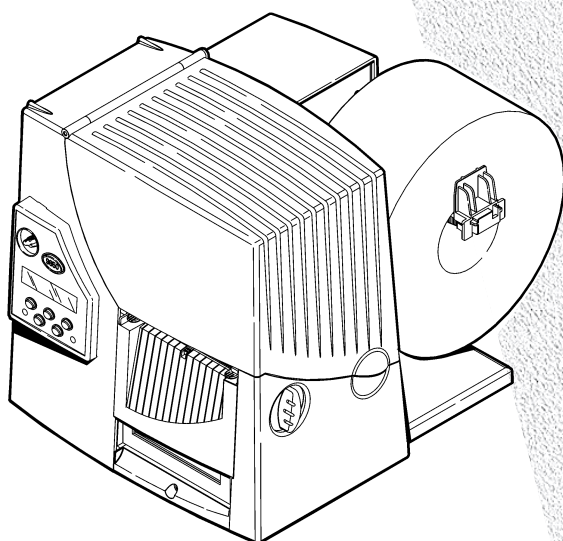


# Operator's Handbook



23456 78901  
Ship From:  
Dayton, Ohio

1 23456 78901  
Ship From:  
Dayton, Ohio

1 23456 78901  
Ship From:  
Dayton, Ohio

**Monarch®**  
**9800™ Series**  
**Printers**

**Monarch®**  
**PAXAR**

Each product and program carries a respective written warranty, the only warranty on which the customer can rely. Monarch reserves the right to make changes in the product, the programs, and their availability at any time and without notice. Although Monarch has made every effort to provide complete and accurate information in this manual, Monarch shall not be liable for any omissions or inaccuracies. Any update will be incorporated in a later edition of this manual.

©2000 Monarch Marking Systems, Inc. All rights reserved. No part of this publication may be reproduced, transmitted, stored in a retrieval system, or translated into any language in any form by any means, without the prior written permission of Monarch Marking Systems, Inc.

#### **WARNING**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

#### **CANADIAN D.O.C. WARNING**

This digital apparatus does not exceed the Class A limits for radio noise emissions from digital apparatus set out in the Radio Interference Regulations of the Canadian Department of Communications.

Le présent appareil numérique n'émet pas de bruits radioélectriques dépassant les limites applicables aux appareils numériques de la classe A prescrites dans le Règlement sur le brouillage radioélectrique édicté par le ministère des Communications du Canada.

#### **Trademarks**

MONARCH<sup>®</sup>, 917, 9800, and 9850 are trademarks of Monarch Marking Systems, Inc.

Paxar is a trademark of Paxar Corporation.

Microsoft and MS-DOS are registered trademarks of Microsoft Corporation.

Windows and NT are registered trademarks of Microsoft in the U.S. and other countries.

NetWare is a registered trademark of Novell, Inc. in the United States and other countries.

Centronics is a registered trademark of Centronics Data Computer Corporation.

TrueType is a registered trademark of Apple Computer, Inc.

Hewlett-Packard is a registered trademark of Hewlett-Packard Inc.

HP Jet Admin and HP Web Jet Admin are trademarks of Hewlett-Packard, Inc.

Adobe and Acrobat are trademarks of Adobe Systems Incorporated which may be registered in certain jurisdictions.

Other products are trademarks or registered trademarks of their respective countries and are hereby acknowledged.

Monarch Marking Systems  
P.O. Box 608  
Dayton, Ohio 45401

# DECLARATION OF CONFORMITY

---

Manufacture's Name : Monarch Marking Systems, Inc.  
Manufacture's Address : 170 Monarch Lane, at I75 and SR725  
Miamiisburg, Ohio 45342  
U.S.A.

**Declares that the product :**

Product Name : Table Top Thermal Printer

Model Number : 9850, M09850

**Conforms to the following Product Specifications :**

Safety : EN60950, AM1, AM2  
EMC : C.I.S.P.R. 22, EN 55022 Class A  
FCC Part 15, Subpart B, Class A  
EMI : EN 55024 Generic Immunity Standard  
EN61000-4-2 ESD  
EN61000-4-3 Radiated Electromagnetic  
EN61000-4-4 Electrical Fast Transient / Burst  
EN 60555-2 & EN61000-3-2 Line Harmonics  
Ergonomics : NA

**According to :**

- EMC directive - 89/336/EEC
- Low Voltage directive - 73/23/EEC

Miamisburg, Ohio  
Location

December 7, 2000  
Date

  
Signature



# TABLE OF CONTENTS

<b>GETTING STARTED</b> .....	1-1
Audience .....	1-2
Unpacking the Printer .....	1-2
9445™ Printer Online Emulation .....	1-2
Ordering Programmer's Manuals .....	1-2
About Monarch® MPCL™ Toolbox Utilities .....	1-2
Connecting the Power Cable .....	1-3
Establishing Communications .....	1-3
Connecting the Communication Cable .....	1-4
Using the Control Panel .....	1-4
Printer Status Lights .....	1-4
Button Functions .....	1-5
Display .....	1-6
Selecting a Function .....	1-6
Exiting an Option .....	1-7
<b>LOADING SUPPLIES</b> .....	2-1
Loading Labels or Tags .....	2-2
Using the Optional Tear Bar .....	2-8
Using Linerless Supply .....	2-9
Adding the Peel Edge or Shelf .....	2-9
Adjusting the Wide/Narrow Knobs .....	2-13
<b>LOADING RIBBON</b> .....	3-1
Loading Ribbon .....	3-2
Using a High Energy Ribbon .....	3-4
High Energy Ribbon Limitations .....	3-5

<b>SETTING SUPPLY OPTIONS</b>	4-1
Ribbon	4-2
Batch Separators	4-3
Feed Mode	4-4
Print Position	4-4
Supply Position	4-6
Margin Position	4-7
Cut Position	4-8
Supply Type	4-9
Speed	4-10
Backfeed	4-11
Verifier	4-12
Verifier Considerations	4-12
Setting Contrast	4-13
<b>COMMUNICATION VALUES</b>	5-1
Baud Rate	5-2
Word Length	5-2
Stop Bits	5-3
Parity	5-3
Flow Control	5-4
Reset to Default Values	5-5
Parallel Communications	5-5
<b>SETTING DEFAULTS</b>	6-1
Monetary Sign	6-2
Secondary Sign	6-3
Decimal Places	6-4
Slashed Zero	6-5
Power-Up Mode	6-6
Prompt Set	6-7
Setting Format Options	6-8

<b>PRINTING</b> .....	7-1
Printing .....	7-1
On-Demand Mode Printing .....	7-2
Printing an Error Label .....	7-2
Pausing a Batch .....	7-3
Restarting a Batch .....	7-3
Canceling a Paused Batch .....	7-4
Repeating a Batch .....	7-6
Offline Printing .....	7-7
Entering a Batch .....	7-7
Special Printing Considerations .....	7-8
Printing TrueType® Fonts .....	7-9
Licensing Your Fonts .....	7-10
<b>CARE AND MAINTENANCE</b> .....	8-1
Clearing Label Jams .....	8-1
Cleaning .....	8-1
Replacing the Printhead .....	8-4
Adjusting the Print Contrast .....	8-7
<b>DIAGNOSTICS</b> .....	9-1
Factory Set Password .....	9-1
Checking the Software Version .....	9-1
Printing a Test Label .....	9-2
Checking Supply Quality .....	9-3
Using Password Protection .....	9-4
Enabling the Password (System Administrators only) .....	9-4
Service Diagnostics .....	9-5
<b>TROUBLESHOOTING</b> .....	10-1
Troubleshooting .....	10-2
Error Messages .....	10-3
Common Errors .....	10-3

**SPECIFICATIONS** ..... A-1

    Printer..... A-1

    Supplies..... A-2

        Linerless Supplies..... A-3

    Ribbon Specification ..... A-3

        About Ribbons..... A-4

    Cable Pinouts..... A-4

**ACCESSORIES & OPTIONS**..... B-1

    Accessories ..... B-1

    Factory-Installed Options..... B-2

        Ethernet Information ..... B-2



# GETTING STARTED

## 1

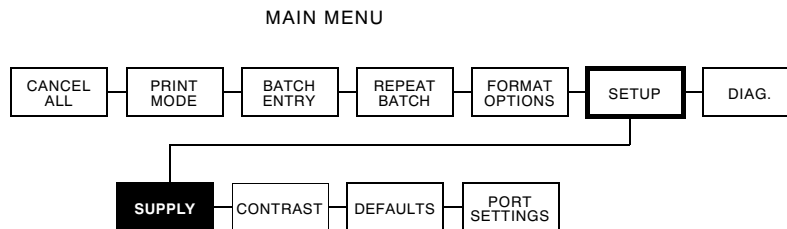
The Monarch® 9850™ printer lets you print text, graphics, and bar codes on thermal transfer (ribbon) and thermal direct labels or tags. The 9850 printer prints labels continuously (in one strip) or on-demand (one label at a time).

You can print on aperture, die cut, black mark, or continuous (non-indexed) supplies. Continuous supply must be used in continuous mode. See "Supply Type" in Chapter 4 for more information about the supply types.

This chapter includes information about

- ◆ unpacking the printer.
- ◆ connecting the power cord.
- ◆ connecting the communication cable.
- ◆ using the printer's control panel.

Several chapters of this manual have one or more charts showing the printer's menu structure. For example:



The black boxes show where you are; the bordered boxes show how you got there.

---

## Audience

---

The *Operator's Handbook* is for the person who prints and applies labels.

---

## Unpacking the Printer

---

After you unpack the printer, you should have the 9850 printer, a power cord, and a ribbon take-up core (may already be on take-up reel). Keep the box and packaging material in case the printer ever needs repair.

---

## 9445™ Printer Online Emulation

---

The 9850 printer using 203 dpi (dots per inch) printing supports 94x5 emulation. You can send 94x5 data streams to the 9850 printer.

Refer to your 9445 *Programmer's Manual* for information about 94x5 data streams.

---

## Ordering Programmer's Manuals

---

The *Packet Reference Manual*, which describes how to create format and batch packets for printing labels, how to configure the printer online, how to diagnose printer error messages, and how to perform other advanced techniques can be downloaded from our Web site ([www.monarch.com](http://www.monarch.com)). You can print this manual or order a hard-copy version (part number **TC9800PM**).

---

## About Monarch® MPCL™ Toolbox Utilities

---

The Monarch® MPCL™ Toolbox utilities are available on our Web site and are free to download. This group of development utilities helps you configure the printer, customize fonts, and download files. Monarch MPCL Toolbox utilities are not label production software. Call Customer Service for information about label production software.

## Connecting the Power Cable

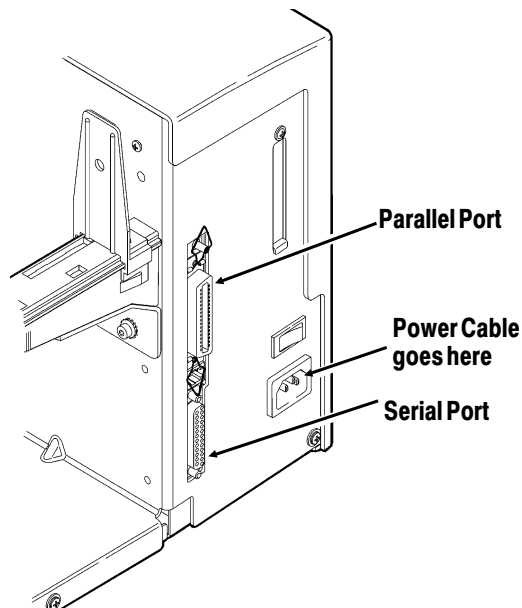
The power supply automatically switches between 115V or 230V. No operator settings are required.

1. Plug the power cable into the socket. Plug the other end of the cable into a grounded electrical outlet.
2. Turn on the printer. Press ( I ) to turn on and ( O ) to turn off the printer.

## Establishing Communications

Before the printer can accept print jobs from the host, you must:

- ◆ Connect the communication cable to the printer and to the host.
- ◆ Set the communication values on the printer to match those at the host. (Only required if you are using the serial port.)
- ◆ Make sure the printer is off before connecting the cable to the communication port.



Ask your System Administrator which method you will use to communicate with the host:

Serial Communication  
9 to 25 pin cable  
(Part #118364)  
25 to 25 pin cable  
(Part #118366)

Parallel Communication  
IEEE-1284 or Centronics®  
mode cable (Part  
#118363)

## Connecting the Communication Cable

Connect the communication cable into the appropriate port. Secure the cable with the connecting screws (serial) or spring clips (parallel).

If you are communicating with the host through the serial port, make sure the printer's communication values match those at the host. The factory default values are 9600 Baud, 8 bit data frame, 1 stop bit, no parity, and DTR flow control.

---

The printer supports a baud rate up to 115200. Make sure your host is capable of communicating at the speed you select for the printer.

---

## Using the Control Panel

The control panel has a two-line LCD display, 2 status lights, and five buttons.

The control panel displays error codes/messages, and allows you to setup/configure the printer.

### Printer Status Lights

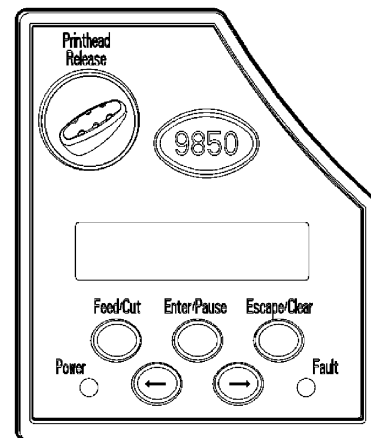
#### Power:

The printer shows a steady green light when it is on.

The Power light blinks when the battery needs to be recharged (only on battery-powered/cart models).

#### Fault:

The printer shows a blinking amber light when there is a printer error.



## Button Functions

### Feed/Cut:

- ◆ Prints a label in the on-demand mode.
- ◆ Feeds a blank label if there is no print job.
- ◆ Prints a label with error information that is useful to your System Administrator if an error is displayed.
- ◆ Cuts the supply when pressed and held for two seconds if a knife is installed.

### Enter/Pause:

When the printer is online, pauses the current print job or resumes a paused print job.  
When the printer is offline, selects the displayed menu item.

### Escape/Clear:

- ◆ When an error is present, clears the error.
- ◆ When a job (batch) is printing, cancels the print job (batch). For more information about canceling batches, see "Canceling a Paused Batch" in Chapter 7.
- ◆ When the printer is online (without errors), enters the offline menu mode.
- ◆ When the printer is in the offline menu mode, returns the display to the next higher menu.



When the printer is in the offline menu mode, displays the previous menu item.



When the printer is in the offline menu mode, displays the next menu item.

⬅ and ➡

In online mode, prints a test label when you press the buttons at the same time. Hold for one second and release.

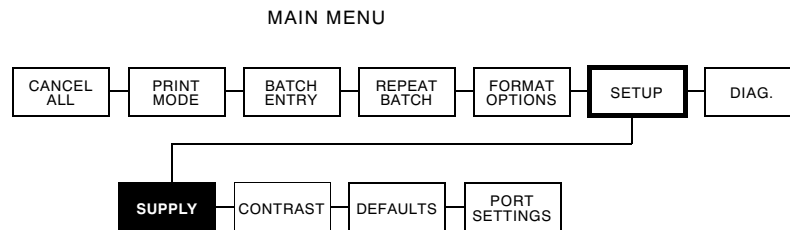
## Display

The display shows a three-digit error code and brief message to identify any problem the printer may have. For a description of the problem, look up the error code in Chapter 10, "Troubleshooting."

If there is no error, the display is blank.

## Selecting a Function

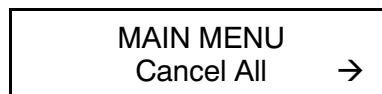
The Main menu has several functions (operating modes). These functions are shown in the chart below.



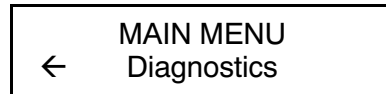
If the printer displays **PRINT MODE Ready** when you turn it on, press **Escape/Clear** to display the Main menu.

To display menu options, press ⬅ or ➡.

- ◆ When the screen displays a right arrow, press ➡ to display more options.



- ◆ When the screen displays a left arrow, press ⬅ to display more options.



- ◆ When the screen displays a left and a right arrow, press either ⬅ or ➡ to display more options.



- ◆ When you see the menu option you want, press **Enter/Pause** to select it.

The Main Menu controls the printer's setup and operation. Through the Setup Menu, you can select a sub-menu for the supply, contrast, default, or port settings. Each of those sub-menus have several options, such as ribbon, speed, monetary symbols, and baud rate.

## Exiting an Option

---

To exit an option, press **Escape/Clear** once. You will exit to the next higher menu.

---

If you press **Escape/Clear** from a menu, your settings are not saved. Your settings are only saved when you press **Enter/Pause** from a menu.

---





# LOADING SUPPLIES

## 2

This chapter describes how to load:

- ◆ a roll of supply
- ◆ fan-fold supply
- ◆ a roll of tag supply.

There are three types of supplies:

<b>Thermal Direct</b>	specially treated thermal supplies that do not use a ribbon for printing.
<b>Thermal Transfer</b>	standard supplies that require a ribbon for printing.
<b>High Energy</b>	scratch, chemical, and temperature resistant supplies that require a ribbon able to withstand high temperatures. See "Using a High Energy Ribbon" in Chapter 3 for more information.

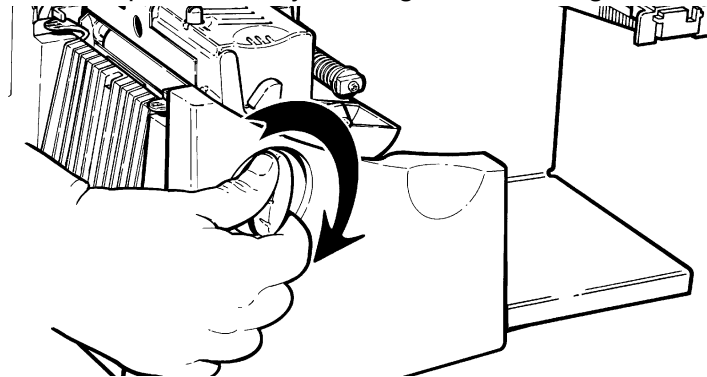
If you are using thermal direct supplies, do not load a ribbon.

If you switch from black mark to die cut supplies, make sure the printer's supply type is set correctly. See "Supply Type" in Chapter 4 for more information. Your System Administrator can also send the supply setup packet to change the supply type. Refer to the optional *Packet Reference Manual* for more information about sending the supply setup packet.

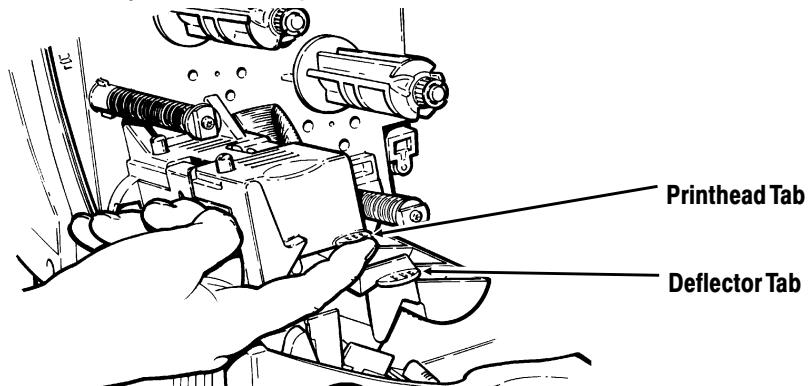
## Loading Labels or Tags

Make sure the printer is configured for the correct supply type.

1. Open the cover.
2. Unlock the printhead by turning the retaining latch.

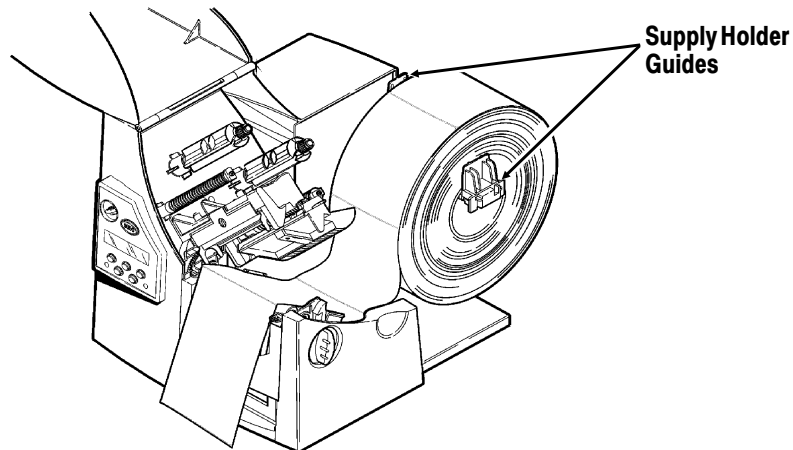


3. Lift printhead assembly using the printhead tab until the assembly locks into place.



4. Place the roll of supply on the supply holder. For labels, the supply unrolls from the top or the bottom. For tags, make sure the supply unrolls from the bottom, because tag rolls are wound face in.

Do not pick up the printer  
by the supply holder.

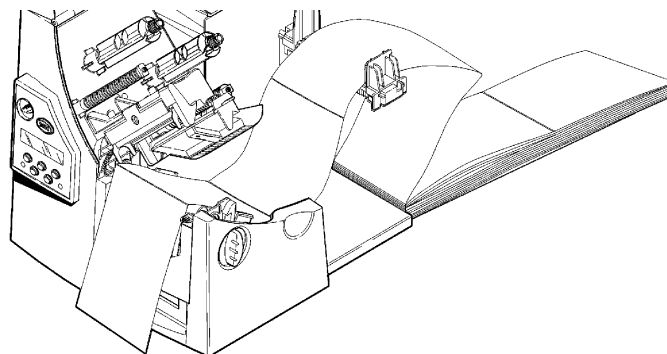


5. Adjust the supply holder guides so the sides barely touch the roll. Make sure the supply roll turns freely.

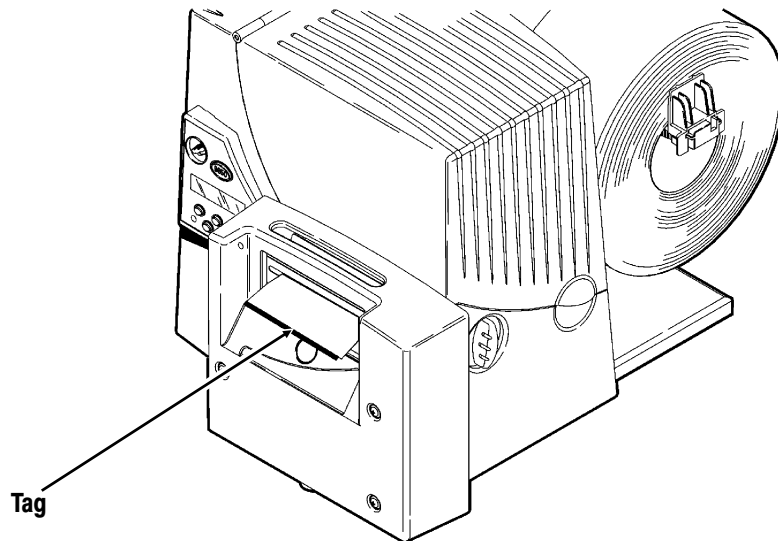
**If you are using fan-fold supplies**, place the supply stack behind the printer, label side facing up.

6. Push down on the supply lever to unlock the supply guides.
7. Lay the label strip across the supply guide so that a few inches extend past the front of the printer. Tuck the supply under the nibs and in between the die cut sensor.

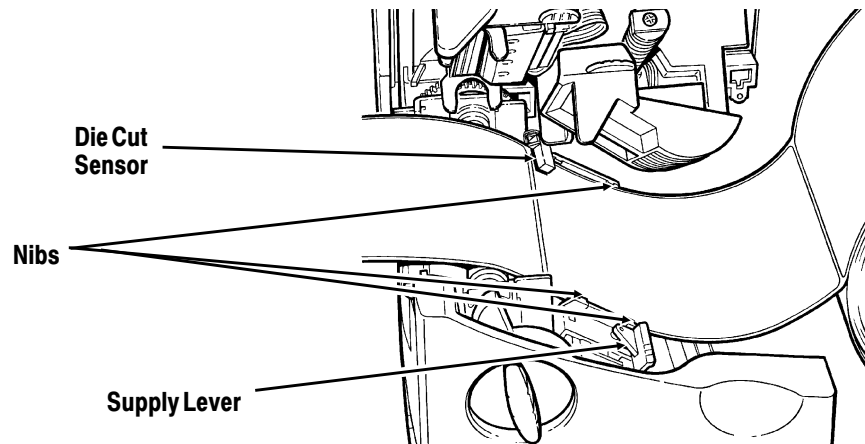
**For fan-fold supplies**, lay the label strip over the supply holder and across the supply guide so that a few inches extend past the front of the printer. Tuck the supply under the nibs and in between the die cut sensor.



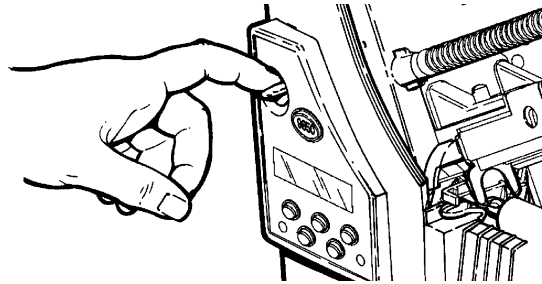
**For tag supplies using the optional knife,** feed the supply through the knife. Make sure at least 0.5 inches of supply is past the knife.



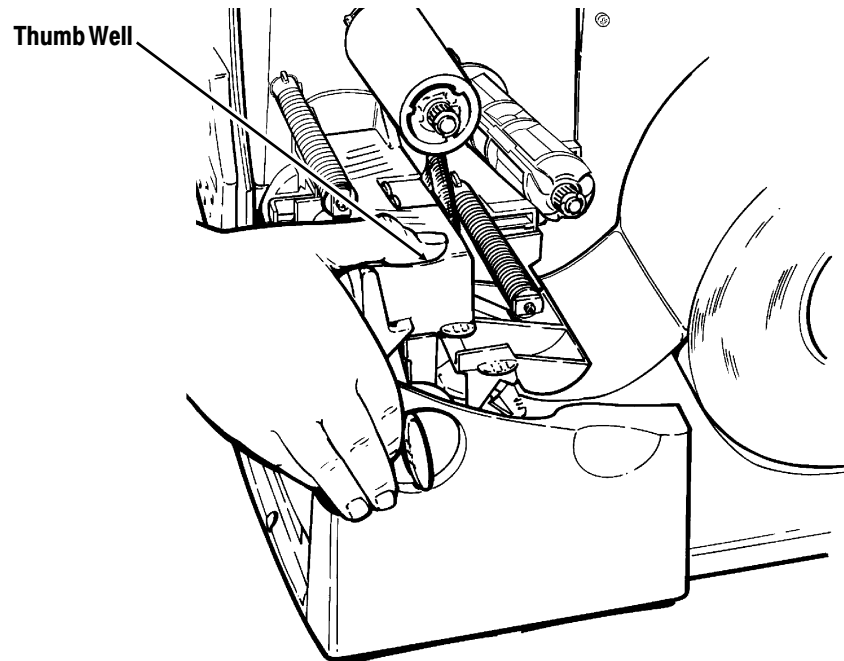
8. Adjust the supply guides so they touch the supply. Push up on the supply lever to lock the supply guides into place.



9. Hold the printhead assembly by the printhead tab while pressing down on the printhead release.



10. Close the printhead by pressing down on the thumb well until you hear it click into place.



11. Close the cover.
12. Press **Feed/Cut** to position the supply under the printhead.

You may need to adjust the wide/narrow knobs depending on the width of your supply. See "Adjusting the Wide/Narrow Knobs" for more information.

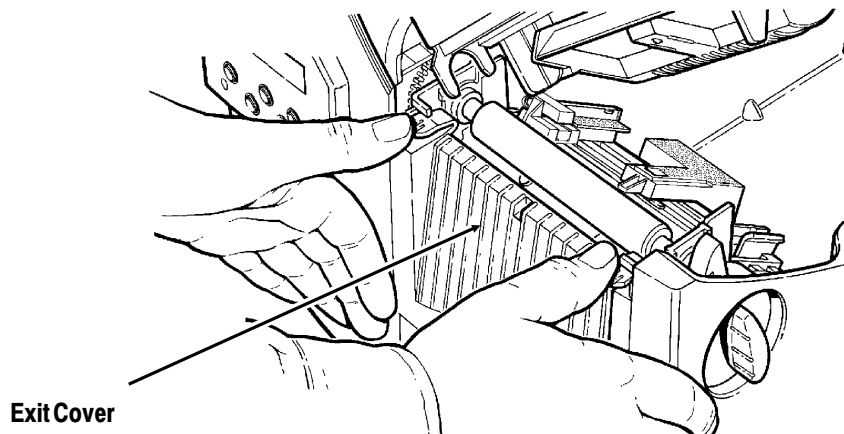
If the printer will be unused for extended periods of time, we recommend leaving the printhead unlatched.

### **Loading Labels for the Optional Peel Mode:**

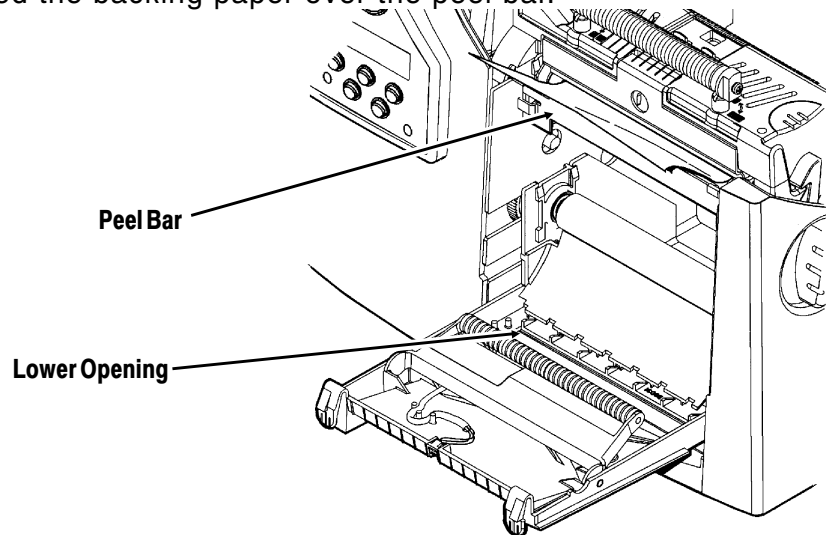
Peel mode is an option that must be purchased separately. In peel mode, the printer separates the backing paper from the label. The next label is not printed until the completed one is removed from the printer. Make sure the printer is configured for on-demand mode and the correct supply type.

The minimum feed length is 1.5 inches for peel mode. We recommend using 0.5-inch gap supplies in peel mode when backfeed is disabled. Hold the leading edge of peeled labels when printing on stock longer than six inches. You must use non-perforated supplies for peel mode. Follow the steps for loading supplies from the previous section. Then, follow these steps after you close the printhead.

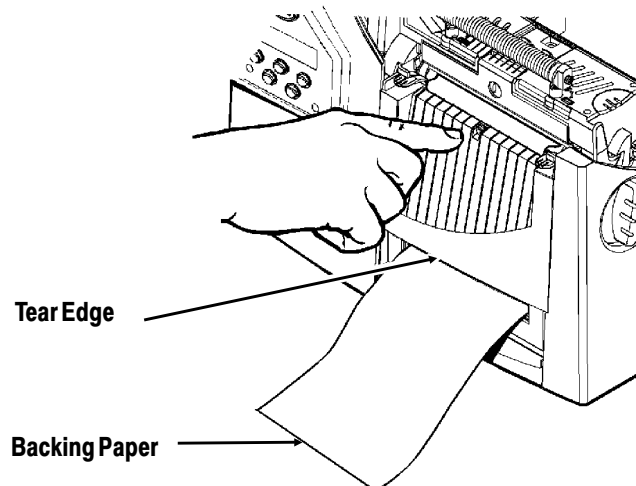
1. Remove the labels from the first 10 inches of the backing paper.
2. Press down on the exit cover tabs to open the exit cover on the front of the printer.



3. Feed the backing paper over the peel bar.



4. Feed the backing paper through the lower opening of the exit cover. Close the exit cover. Pull down on the backing paper to remove any slack.



**When removing the backing paper, pull up across the saw-toothed tear edge.** Make sure the backing paper tears at the edge.

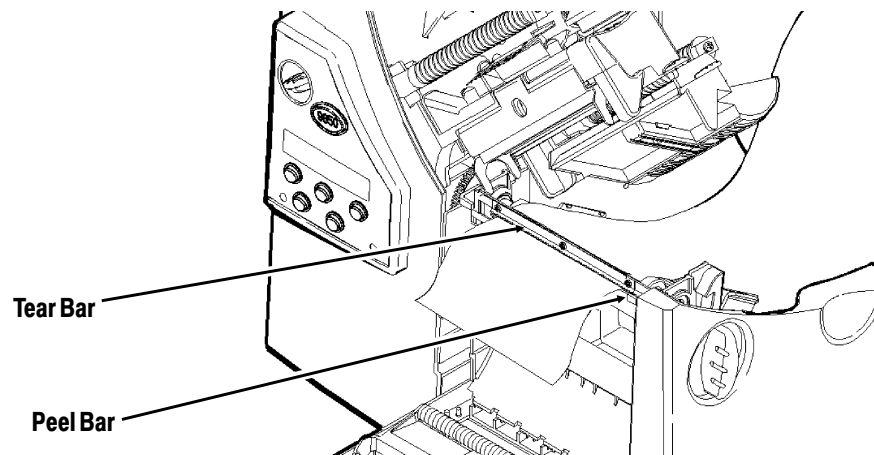
5. Close the printer's cover.
6. Press **Feed/Cut** to position the supply under the printhead.

## Using the Optional Tear Bar

---

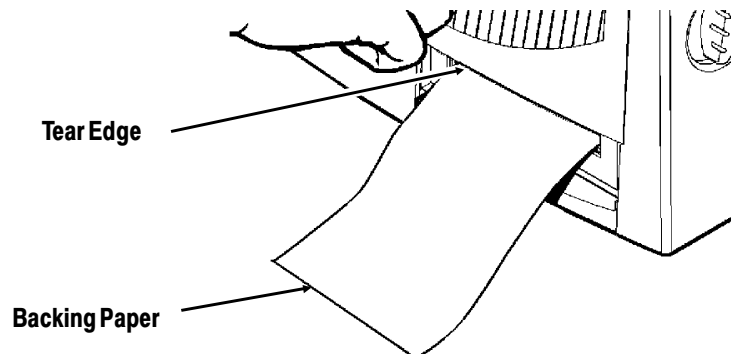
Note the following change to loading labels if you have purchased the optional tear bar. Tear labels against the tear bar. You cannot tear tags with the tear bar.

Slide the supply between the tear bar and peel bar.



Do not tear both label and backing paper at the same time.

- ◆ Tear labels against the tear bar.
- ◆ Tear backing paper against the tear edge.





## Using Linerless Supply

---

Linerless printing is an option that must be purchased separately on the original printer order. The linerless option is **not** customer or field-installable.

You must use thermal direct and black mark supplies for linerless applications. The linerless printer must use on-demand mode.

For maximum platen roller life, use only wide or only narrow supplies. Switching between wide and narrow supplies may lead to uneven platen roller wear and possibly reduce the platen roller life. Narrow supplies are two inches wide or less. Wide supplies are greater than two inches.

---

To prevent jams, do not leave the printhead closed (in the locked position) longer than 30 minutes without printing. Open (unlock) the printhead before a break period, at the end of each shift, and at the end of each day.

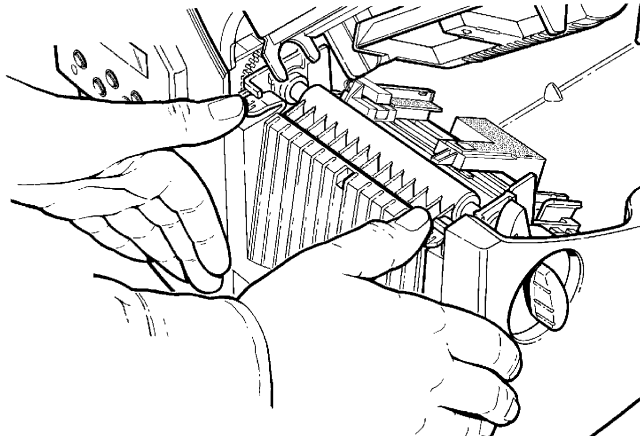
---

Your linerless machine includes a shelf already installed. You can remove the shelf and add the peel edge if you are **not** using linerless supplies.

### Adding the Peel Edge or Shelf

1. Turn off the printer.
2. Open the cover.
3. Unlock the printhead by turning the retaining latch.
4. Lift the printhead assembly using the printhead tab until the assembly locks into place.

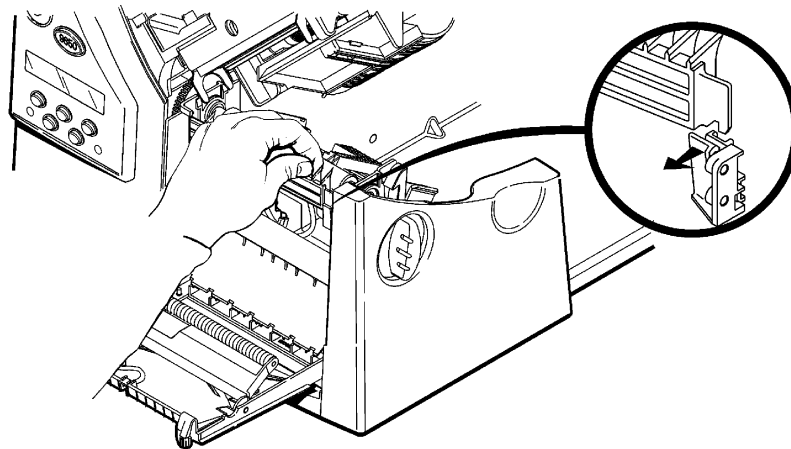
5. Press down on the exit cover tabs to open the exit cover.



6. Pull back slightly on the spring latch with your thumb or fingernail and lift the shelf out.

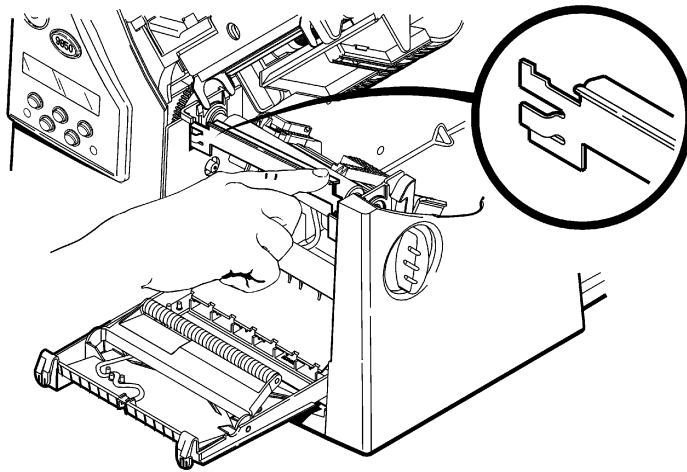
**CAUTION**

Be careful when inserting or removing the shelf. The shelf has sharp points.



**7. If inserting the peel bar:**

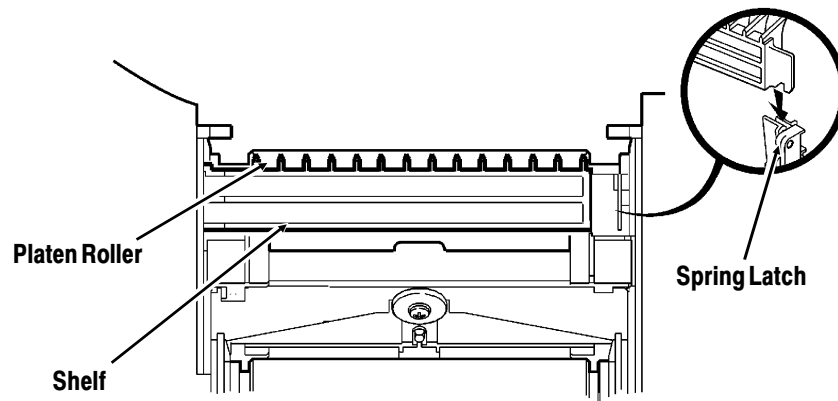
Insert the left edge of the peel bar into the side slot at an angle. Then, slide the peel bar to the right and press down until you hear it click into place. The peel bar must be lined up with the platen roller.



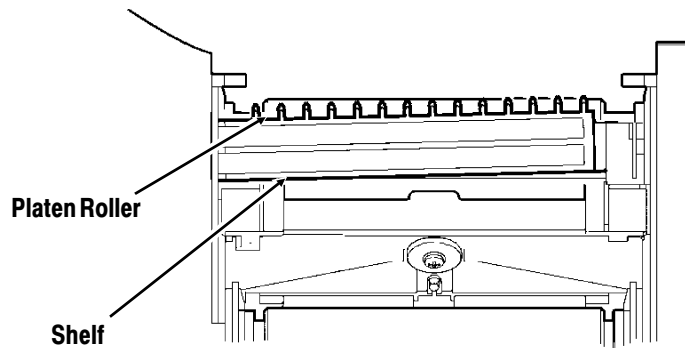
**8. If inserting the shelf:**

Insert the left edge of the shelf into the side slot at an angle. Slide the shelf to the right, aligning it with the spring latch, and press down until you hear it click into place. The shelf must be lined up with the platen roller.

The shelf must be parallel to the platen roller, not at an angle. See the following diagrams.



**Shelf inserted correctly.**



**Shelf not inserted correctly.**

**CAUTION**

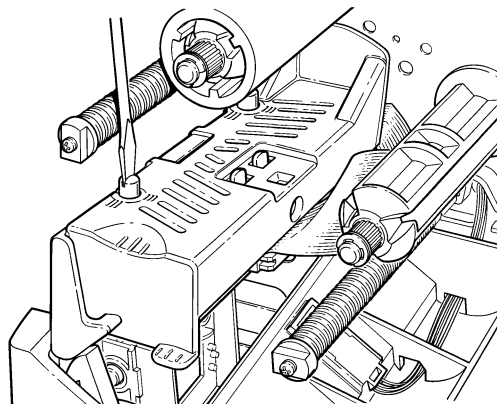
Make sure the shelf is not misaligned with the platen roller, or damage to the platen roller could occur.

9. Close the exit cover.
10. Load supplies by following the label loading procedures. You may notice a different color and texture on the platen roller. Linerless supplies do not stick to the textured platen roller.
11. Close the printhead assembly and the cover.
12. Turn on the printer.
13. Verify the alignment of the platen roller with the peel bar or shelf. Press **Feed/Cut** to position the supply under the printhead.

## **Adjusting the Wide/Narrow Knobs**

---

You may need to adjust the two wide/narrow knobs according to the width of your supply. For supply that is more than two inches, adjust the knobs to the wide setting. For supply that is two inches or less, adjust the knobs to the narrow setting. For linerless supply, use the narrow setting (knobs are up).



---

You must adjust both of the knobs to  
the same position.

---

If you experience ribbon smudging in cold, dry environments, adjust the wide/narrow knobs to the wide setting.

For wide supplies, push down and turn the wide/narrow knobs clockwise with a screwdriver.

For narrow supplies, turn the wide/narrow knobs counter-clockwise with a screwdriver until it pops back up.

The adjustment is shown in the wide position.

# LOADING RIBBON

## 3

This chapter describes how to load a ribbon roll.

There are different ribbon requirements for the three types of supplies:

**Thermal Direct Supplies** do not use a ribbon for printing.

**Thermal Transfer Supplies** require a ribbon for printing.

**High Energy Supplies** require a ribbon able to withstand high temperatures.

If you are using thermal direct supplies, do not load a ribbon. If you are using high energy supply, be sure to use a high energy ribbon. See "Using a High Energy Ribbon" for more information. If you want to use a high energy ribbon, select high energy for the ribbon every time the printer is turned on. See "Ribbon" in Chapter 4 for more information.

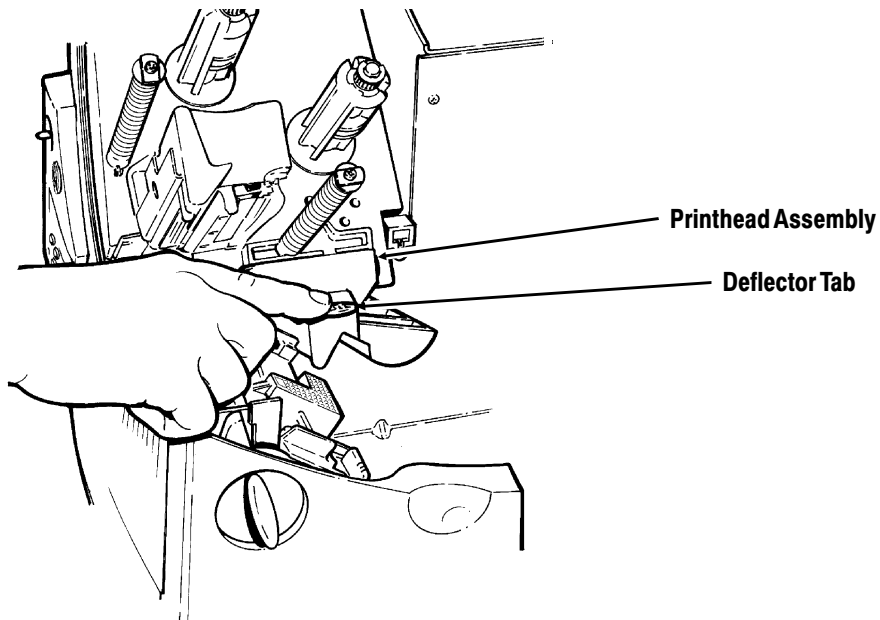
## Loading Ribbon

---

Make sure the printer is configured to use a ribbon.

To load ribbon:

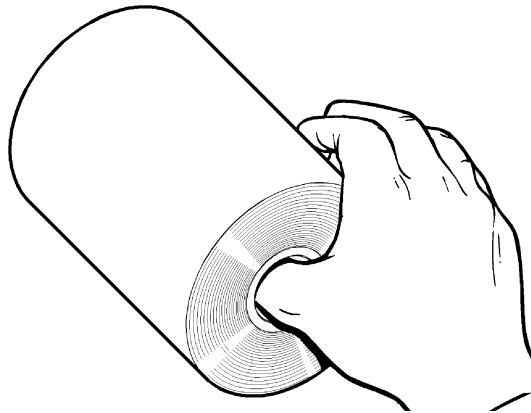
1. Open the cover.
2. Unlock the printhead by turning the retaining latch.
3. Lift printhead assembly using the printhead tab until the assembly locks into place.



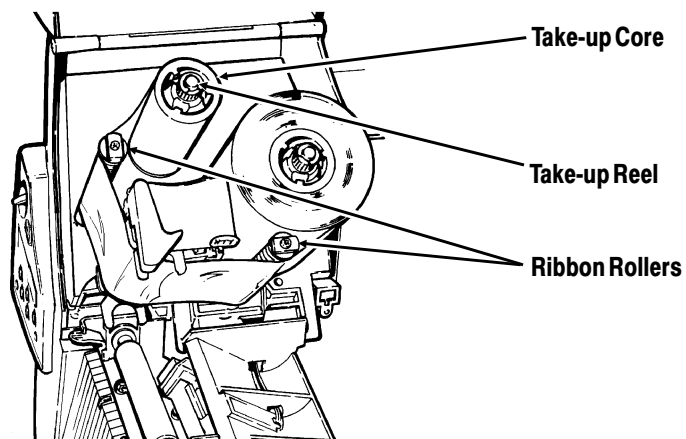
4. Push the deflector tab down.
5. Slide the extra ribbon core on the take-up reel as far as it will go with the "Monarch This End Out" writing facing out. Use your empty ribbon core as the take-up core. The take-up core only fits on the take-up reel one way. (An extra take-up core is available by ordering part number 117961.)



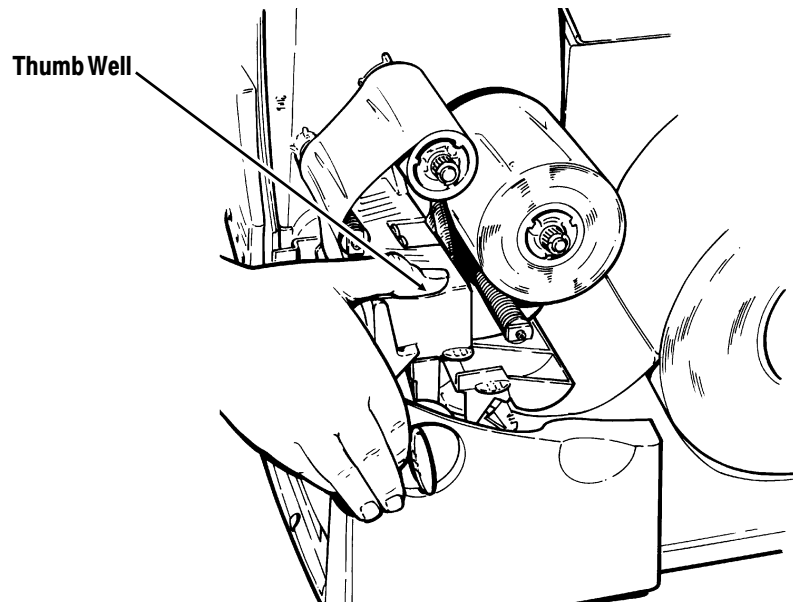
6. Remove the new ribbon from the package as shown. Do not wrinkle or crush the new ribbon.



7. Slide the ribbon onto the back reel as far as it will go. The ribbon roll only fits on the reel one way. Carefully unwind a few inches of ribbon from the bottom of the roll.
8. Carefully feed the ribbon under both ribbon rollers and printhead as shown.
9. Align the ribbon and make sure it is straight and centered throughout the path.
10. Tape the ribbon to the take-up core. ***Do not tape the ribbon to the take-up reel.***



11. Rotate the take-up core until the leader is past the printhead.
12. Remove any slack in the ribbon by turning the take-up reel clockwise.
13. Hold the printhead assembly by the printhead tab while pressing down on the printhead release.
14. Close the printhead by pressing down on the thumb well until you hear it click into place. Close the cover.



## Using a High Energy Ribbon

High energy ribbon is an option for the 9850 printer. It enables you to print on high energy (TUFF-MARK®) supplies.

When you select high energy ribbon for the printer setting, you are setting the printer to a higher printing temperature. Select this setting only after you have loaded a high energy ribbon and supply or it may damage your printhead. Select a high energy ribbon every time you turn on the printer. See "Ribbon" in Chapter 4 for more information.

The high energy setting is lost when you turn off the printer.

### **High Energy Ribbon Limitations**

When using the high energy ribbon option:

- ◆ Use a print speed of 2.5IPS (inches per second).
- ◆ Printhead warranty is reduced to 100,000 inches.
- ◆ Serial bar codes cannot be printed.
- ◆ Do not use peel mode.
- ◆ No more than 20% of the supply should have print (black coverage).

### **CAUTION**

The high energy ribbon may break or stick to the supply when more than 20% of the supply contains print.

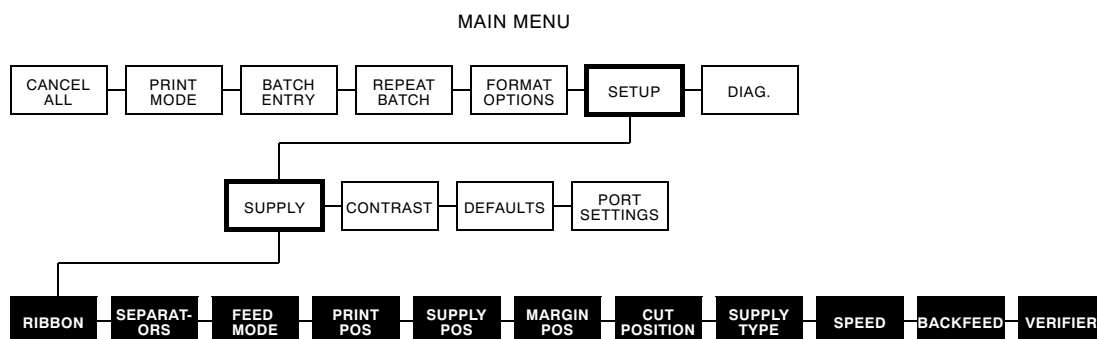
- ◆ Only white high energy supply should be used for bar code printing.
- ◆ Reverse fonts cannot be used.
- ◆ A non-printing area of at least .1 inch (2.54 mm) must exist on the left and right edge of the ribbon.
- ◆ Do not print horizontal lines or bars.
- ◆ Graphics are limited.

### 3-6 Loading Ribbon

# SETTING SUPPLY OPTIONS

## 4

This chapter explains how to select a ribbon, separators, feed mode, print position, supply position, margin position, cut position, supply type, speed, and backfeed.



You may need to set supply options when you change supplies. The options are listed in the table below.

Option	Choices	Default
Ribbon	No/Yes/High Energy	Yes
Separators	No/Yes/Long	No
Feed Mode	Continuous/On-Demand	Continuous
Print Position	-99 to +99	0
Supply Position	-300 to +300	0
Margin Position	-99 to +99	0
Cut Position	-300 to +300	0
Supply Type	Aperture/Die Cut/Black Mark/Continuous	Die Cut
Speed	2.5/4.0/6.0/8.0/10.0/Default	Default
Backfeed	Off/On/Extended	Off
Verifier	Disabled/Enabled	Disabled

To exit an option without changing the setting, press **Escape/Clear**.

## Ribbon

---

You have to tell the printer if your supplies require a ribbon. To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

SUPPLY Ribbon	$\rightarrow$
------------------	---------------

2. Press **Enter/Pause** to set the ribbon option. You will see the current setting, for example:

$\leftarrow$	RIBBON Yes	$\rightarrow$
--------------	---------------	---------------

3. Press  $\leftarrow$  or  $\rightarrow$  to see the other options. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

---

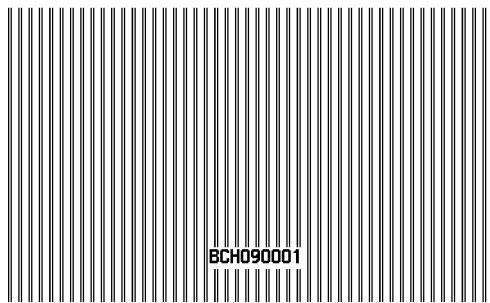
If you set the Ribbon option to **Yes**, install a ribbon before printing.

If you want to use a high energy ribbon, select high energy for the ribbon every time the printer is turned on.

## Batch Separators

---

A batch separator is an extra tag printed in between batches with a pinstripe pattern. If you select "Long" for the separator, a double-length (two tags) separator prints. For non-indexed supply, the batch separator is always six inches long. If you have the Monarch® 928™ stacker installed, the batch separator is 3.66 inches long. The name of the batch is shown on the batch separator.



**Batch Separator**

---

Changing this setting only affects new  
formats sent to the printer.

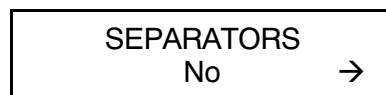
---

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see



2. Press **Enter/Pause** to set the batch separators option. You will see the current setting, for example:



3. Press  $\leftarrow$  or  $\rightarrow$  to see the other options. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Feed Mode

---

You can use continuous or on-demand printing. On-demand printing allows you to remove a label before printing the next one.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

$\leftarrow$	SUPPLY Feed Mode	$\rightarrow$
--------------	---------------------	---------------

2. Press **Enter/Pause** to set the feed mode. You will see the current setting, for example:

FEED MODE Continuous	$\rightarrow$
-------------------------	---------------

3. Press  $\leftarrow$  or  $\rightarrow$  to see the other option. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Print Position

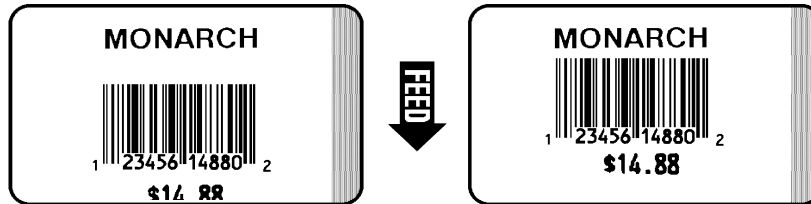
---

This function adjusts where data prints vertically on the supply. Adjust the print if it is too close to the top or bottom of the supply, or overtypes the pre-printed area. One dot is 0.0049 inch.

- ◆ If the data is too close to the bottom, increase the number.
- ◆ If the data is too close to the top, decrease the number.



Changing this setting only affects new  
formats sent to the printer.

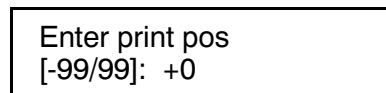


To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see



2. Press **Enter/Pause**. You will see the current setting, for example:



3. Press  $\leftarrow$  or  $\rightarrow$  to change the print position. Pressing  $\leftarrow$  decreases the value (moves the image down);  $\rightarrow$  increases it (moves the image up).
4. Press **Enter/Pause** when the number you need appears. Press **Escape/Clear** twice to exit to the Main menu.

## Supply Position

---

This function adjusts the machine to print at the vertical 0,0 point on the supply.

The supply position adjustment should only be made on initial printer setup. For format adjustments, change the print position.

You may need to adjust the supply in or out to allow

- ◆ tags and labels to be removed.
- ◆ die cut labels to be removed easily.

The adjustments are in dots (0.0049 inch).

- ◆ Increase the number to feed more supply out of the chute.
- ◆ Decrease the number to feed less supply out of the chute.

This option takes effect on the next label or tag printed. Changing supply position may also affect print position.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

SUPPLY		
$\leftarrow$	Supply Pos	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

Enter supply pos [-300/300]: +0
------------------------------------

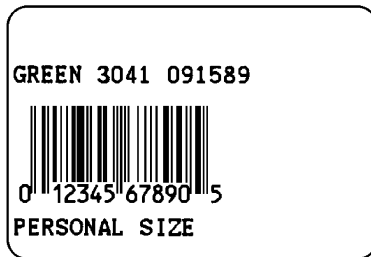
3. Press  $\ominus$  or  $\oplus$  to change the supply position. Pressing  $\ominus$  decreases the value (feeds less supply);  $\oplus$  increases it (feeds more supply).
4. Press **Enter/Pause** when the number you need appears. Press **Escape/Clear** twice to exit to the Main menu.

## Margin Position

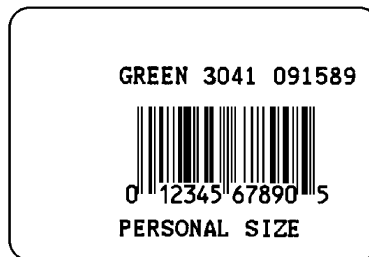
---

This function adjusts where the format prints horizontally on the supply. The adjustments are in dots (0.0049 inch), which is the smallest measurement the printer recognizes.

The width of the print area depends on your supply size. Maximum width is four inches. When you move the image to the right or left on the supply, avoid moving the image too close to either edge, because it may not print.



**Print too far to the left.**



**Print too far to the right.**

- ◆ If the data is too close to the left side, increase the number.
- ◆ If the data is too close to the right side, decrease the number.

---

Changing this setting only affects new  
formats sent to the printer.

---

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

	SUPPLY	
$\leftarrow$	Margin Pos	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

Enter margin pos [-99/99]: +0
----------------------------------

3. Press  $\leftarrow$  or  $\rightarrow$  to change the margin position. Pressing  $\leftarrow$  decreases the value (moves the image toward the left side of the supply);  $\rightarrow$  increases it (moves the image toward the right side of the supply).
4. Press **Enter/Pause** when the number you need appears. Press **Escape/Clear** twice to exit to the Main menu.

## Cut Position

---

This function adjusts where the tag is cut. The printer adjusts the cut position according to the black marks on the supply. You may need to adjust for aperture supplies. Increase to move the cut up; decrease to move the cut down.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

	SUPPLY	
$\leftarrow$	Cut Pos	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

Enter knife adj  
[-300/300]: +0

3. Press  $\ominus$  or  $\oplus$  to change the cut position. Pressing  $\ominus$  decreases the value (moves the cut down);  $\oplus$  increases it (moves the cut up).
4. Press **Enter/Pause** when the number you need appears. Press **Escape/Clear** to exit to the Setup menu.

## Supply Type

---

You can print on aperture, black mark, die cut, or continuous supplies. You have to tell the printer which supplies you are using.

If you are using edge aperture supplies, use the die cut setting. If you are using center aperture supplies, use the aperture setting.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\ominus$  or  $\oplus$  until you see

SUPPLY  
 $\leftarrow$  Supply Type  $\rightarrow$

2. Press **Enter/Pause** to set the supply type option. You will see the current setting, for example:

SUPPLY TYPE  
 $\leftarrow$  Black Mark  $\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  to see the other options. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Speed

---

You can change the print speed for bar codes or graphics. If you select "default" for speed, formats with serial bar codes automatically print at 2.5IPS and formats with parallel bar codes print at 6.0 ips. 10 ips printing is only available using thermal direct labels in continuous mode.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

$\leftarrow$	SUPPLY Speed	$\rightarrow$
--------------	-----------------	---------------

2. Press **Enter/Pause** to set the speed option. You will see the current setting, for example:

$\leftarrow$	SPEED Default
--------------	------------------

3. Press  $\leftarrow$  or  $\rightarrow$  to see the other options. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

---

For additional high speed printing information,  
see Chapter 7, "Printing."

## Backfeed

---

Backfeed works by advancing each printed label to the desired dispense position. Once that label is removed, the next label to be printed is backed up underneath the printhead. In continuous mode, only the last label in the batch is advanced to the dispense position. Extended backfeed is available on 9850 printers with a knife installed. Extended backfeed feeds a tag far enough out to be cut and backfeeds the next tag to the printhead line.

Extended backfeed eliminates *printed* tags being left between the printhead and knife. Extended backfeed works with the selected cut modes. Refer to the optional *Packet Reference Manual* to learn how to define the Backfeed Control Packet. Extended backfeed **does not** work with non-indexed (continuous) supply/mode. Do not use backfeed (normal or extended) with supplies less than 0.75 inches.

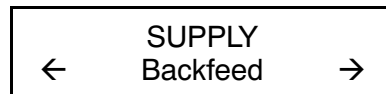
---

We recommend using 0.5-inch gap supplies in peel mode when backfeed is disabled.

---

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press ⬅ or ➡ until you see



2. Press **Enter/Pause** to set the backfeed option. You will see the current setting, for example:



3. Press  $\leftarrow$  or  $\rightarrow$  to see the other options. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu. You can only enable or disable backfeed/extended backfeed. You cannot set the backfeed or dispense position. Your System Administrator should refer to the optional *Packet Reference Manual* to set the backfeed or dispense position.

## Verifier

---

The verifier scans and checks the quality of bar codes as they are printed. The optional verifier must be purchased separately.

To change the setting, from the Main Menu, select Setup, then Supply. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see



2. Press **Enter/Pause** to set the verifier option. You will see the current setting, for example:



3. Press  $\leftarrow$  or  $\rightarrow$  to see the other option. After you display the option you want, press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

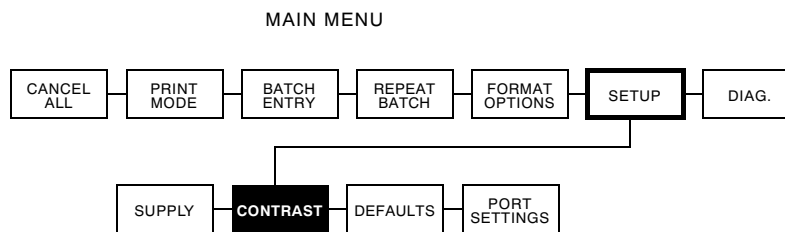
## Verifier Considerations

- ◆ Allow a minimum of 1.3 inch (33 mm) at the top of the labels for the no-scan zone.
- ◆ The minimum feed length is 1.6 inches (41 mm).
- ◆ The maximum print speed is 6.0 inches per second (152 mm).
- ◆ The verifier can not scan serial bar codes.



## Setting Contrast

The print contrast controls the darkness of the printing on your supply. The range is **390** to **+156** and the default is **0**. You may need to increase the print contrast for linerless supplies. Having the correct print contrast setting is important because it affects how well your bar codes scan and how long your printhead lasts. You can use a verifier to check the bar code print quality.



If you set the contrast by turning the knob on the back of the printer, this contrast setting is added to it.

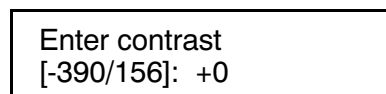
1. From the Main Menu, press  $\leftarrow$  or  $\rightarrow$  until you see



2. Press **Enter/Pause**. You will be at the Setup menu. Press  $\leftarrow$  or  $\rightarrow$  until you see



3. Press **Enter/Pause**. You will see the current setting, for example:

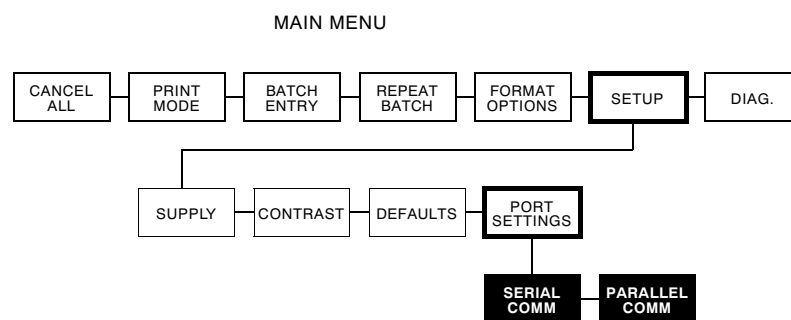


4. Press ⬅ or ➡ to change the contrast. Pressing ➡ darkens the print; ⬅ lightens the print.
5. Press **Enter/Pause** to select the displayed value. Press **Escape/Clear** to exit to the Main Menu.

# COMMUNICATION VALUES

## 5

This chapter tells you how to set the serial or parallel communication values. These values provide the link for normal online printing.



You need to set your Serial Comm values to match your computer's online communications. Before entering the communication values, see your System Administrator.

The serial communication values are listed in the table below.

Option	Choices	Default
Baud rate	1200/2400/4800/9600/19200/ 38400/57600/115200	9600
Word length	7/8	8
Stop bits	1/2	1
Parity	None/Odd/Even	None
Flow control	None/Xon/Xoff/DTR/CTS	DTR
Reset	No/Yes	No

## Baud Rate

---

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps:

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

SERIAL COMM
Baud Rate $\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

BAUD RATE
$\leftarrow$ 9600 $\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  to display the baud rate you need, then press **Enter/Pause**. Press **Escape/Clear** three times to exit to the Main Menu.

## Word Length

---

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps:

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

SERIAL COMM
$\leftarrow$ Word Length $\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

WORD LENGTH
$\leftarrow$ 8 $\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  to display the word length you need, then press **Enter/Pause**. Press **Escape/Clear** three times to exit to the Main Menu.

## Stop Bits

---

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps:

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

SERIAL COMM		
$\leftarrow$	Stopbits	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

STOPBITS		
	1	$\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  to display the number of stop bits you need, then press **Enter/Pause**. Press **Escape/Clear** three times to exit to the Main Menu.

## Parity

---

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps:

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

SERIAL COMM		
$\leftarrow$	Parity	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

PARITY None →
------------------

3. Press ← or → to display the parity you need, then press **Enter/Pause**. Press **Escape/Clear** three times to exit to the Main Menu.

## Flow Control

---

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps:

1. Press ← or → until you see

SERIAL COMM ← Flow Control →
---------------------------------

2. Press **Enter/Pause**. You will see the current setting, for example:

FLOW CONTROL ← DTR →
-------------------------

3. Press ← or → to display the flow control you need, then press **Enter/Pause**. Press **Escape/Clear** three times to exit to the Main Menu.

XON is 17; XOFF is 19. Set flow control to DTR for PC computers (unless you have XON/XOFF software).

## Reset to Default Values

---

To change the setting, from the Main Menu select Setup, Port Settings, then Serial Comm. Then, follow these steps:

1. Press  $\rightarrow$  until you see

SERIAL COMM $\leftarrow$ Reset
-----------------------------------

2. Press **Enter/Pause**. You will see

Are you sure? No $\rightarrow$
-----------------------------------

3. Press  $\leftarrow$  or  $\rightarrow$  to make your selection, then press **Enter/Pause**. Press **Escape/Clear** three times to exit to the Main Menu.

The following defaults are restored: 9600 baud, No parity, 8 bit word length, and 1 stop bit.

## Parallel Communications

---

The parallel communications menu allows you to set the active parallel port to either internal or external. The internal port is used for printer options installed inside the printer, such as the Ethernet communication port. Use the external selection when connecting a printer cable or external device directly to the parallel port.

The mode selection allows the user to select either compatible or IEEE-1284 mode when using the selected parallel port. Usually, the mode should be set to compatible for computer connection using a parallel cable and to IEEE-1284 when using an Ethernet port option. See Appendix B, "Accessories and Options" for more information about Ethernet options.

The parallel communication values are listed in the table below.

Option	Choices	Default
Port	External/Internal	External
Mode	Compatible/IEEE-1284	Compatible (Centronics mode)

To change the setting, from the Main Menu select Setup, Port Settings, then Parallel Comm. Then, follow these steps:

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

PARALLEL COMM  
Port →

2. Press **Enter/Pause**. You will see the current setting, for example:

PORT  
External →

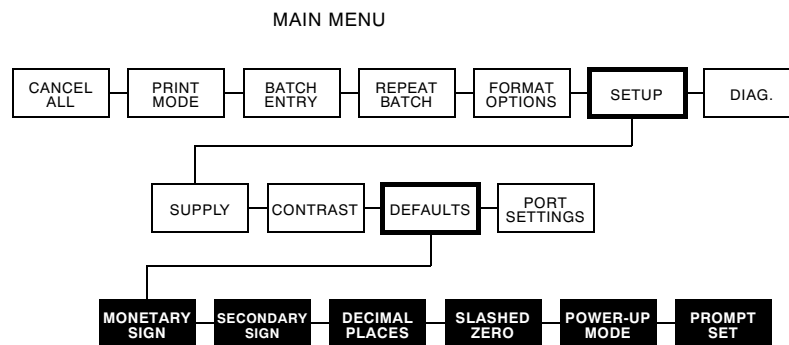
3. Press **Enter/Pause** to select the external port. You are now ready to communicate using an external connection through a cable or external device, such as the external Ethernet print server.



# SETTING DEFAULTS

## 6

This chapter explains how to select the monetary sign, secondary sign, decimal places, slashed zero, power-up mode, and prompt set.



You can set your printer configurations to fit your daily operation, using either the offline menus or the online configuration option. After an option is selected in the online configuration or offline Setup Menu, the option is saved when the printer is turned off.

The monetary formatting options are listed in the table below.

Option	Choices	Default
Monetary sign	None/USA/UK/Japan/ Germany/France/Spain/ Italy/Sweden/Finland/ Austria/India/Russia/ Korea/Thailand/China/Euro-Dollar	USA
Secondary Sign	No/Yes	No
Decimal Places	0/1/2/3	2
Slashed Zero	No/Yes	No
Power-up Mode	Online/Offline	Online
Prompt Set	English/French/German/Spanish	English

The monetary sign, secondary sign, and decimal places options are used in conjunction with option **42**. Refer to the optional *Packet Reference Manual* for more information.

The settings for Monetary Sign, Secondary Sign, Slashed Zero, and Decimal Places are applied when a format is downloaded. Changing the settings does **not** affect batches already in the printer.

## Monetary Sign

You can also select **None** if you do not want a monetary sign to print in price fields. The monetary signs available for 15 countries are shown in the table below.

Country	Currency	Description
USA	\$	dollar
UK	£	pound
Japan	¥	yen
Germany	DM	deutsche mark
France	F	franc
Spain	P	peseta
Italy	L.	lira
Sweden	Kr	krona
Finland	₤	markka
Austria	g	schilling
India	Rs	rupee
Russia	₮	ruble
Korea	₩	won
Thailand	฿	baht
China	¥	yuan
Euro-Dollar	€	euro-dollar

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps. To exit an option without changing the setting, press **Escape/Clear**.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

	DEFAULTS	
$\leftarrow$	Monetary Sign	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

	MONETARY SIGN	
$\leftarrow$	USA	$\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  until you see the country's monetary sign you want.
4. Press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Secondary Sign

---

If you select USA as the monetary sign, you can print amounts less than \$1.00 either by using a dollar sign and decimal (\$0.30) or by using a cent sign (30¢).

- ◆ If you set the secondary sign option to **No**, prices under \$1.00 will print like this: **\$ .45**
- ◆ If you set the secondary sign option to **Yes**, prices under \$1.00 will print like this: **45¢**

The same option applies to the appropriate secondary sign for monetary signs other than USA.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

DEFAULTS		
$\leftarrow$	Secondary Sign	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

SECONDARY SIGN		
	No	$\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  until you see the option you want. Then press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Decimal Places

---

You can set the printer for 0, 1, 2, or 3 places after the decimal in a price field. In U.S. currency, you might print prices like this: \$24.00 (**2** decimal places) or like this: \$24 (**0** decimal places).

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

DEFAULTS		
$\leftarrow$	Decimal Places	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

DECIMAL PLACES		
$\leftarrow$	2	$\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  until you see the option you want. Then press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Slashed Zero

---

The slashed zero feature lets you select how you want the zero character printed; either without a slash, 0 or, with a slash, ø.

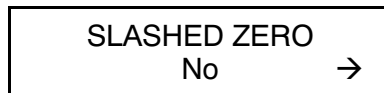
Standard or reduced fonts print the slashed zero character (ø). Bold and OCR fonts print the standard zero (0) only. The slashed zero selection will **not** be in effect until the format is sent to the printer again. If you change the way zero is printed, you must resend your formats.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see



2. Press **Enter/Pause**. You will see the current setting, for example:



3. Press  $\leftarrow$  or  $\rightarrow$  until you see the option you want. Then press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Power-Up Mode

---

Power-up mode lets you decide how your printer starts each time you turn it on. If you want the printer to be ready to start printing when it is turned on, use the Online power-up mode. If you want the operator to perform some other task first, use the Offline power-up mode.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press  $\leftarrow$  or  $\rightarrow$  until you see

DEFAULTS		
$\leftarrow$	Powerup Mode	$\rightarrow$

2. Press **Enter/Pause**. You will see the current setting, for example:

POWER UP MODE		
	Online	$\rightarrow$

3. Press  $\leftarrow$  or  $\rightarrow$  until you see the option you want. Then press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

## Prompt Set

---

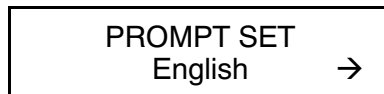
Prompt set determines which language displays on the printer's menu. You can select English, French, German, or Spanish. Some prompts may remain in English, even if you select a different language.

To change the setting, from the Main Menu, select Setup, then Defaults. Then, follow these steps.

1. Press **←** until you see



2. Press **Enter/Pause**. You will see the current setting, for example:



3. Press **←** or **→** until you see the option you want. Then press **Enter/Pause**. Press **Escape/Clear** twice to exit to the Main menu.

---

This option only affects the displayed prompts. It does not change what is printed by the printer.

---

## Setting Format Options

---

You can select Format Options to change which prompts appear during Batch Entry mode and set default values for those prompts. Customizing which prompts appear during batch entry can reduce the time it takes to enter data for a format. If the optional knife is not installed, you can prevent those prompts from appearing during batch entry mode. If you set a new default value for an option, that value is used even if the prompt is not displayed. If you do not change a default value for an option, the system default is used if the prompt is not displayed.

Setting format options requires the optional keypad, which must be purchased separately.



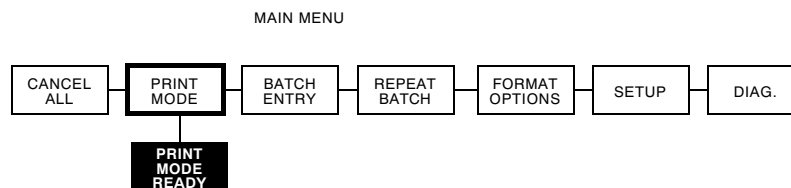
# PRINTING

## 7

This chapter explains how to

- ◆ use on-demand mode printing.
- ◆ print an error label.
- ◆ print, pause, restart, cancel, and repeat a batch.

You can send format, batch, and graphic data to the printer from a host. When the printer receives the data, batches begin printing automatically. The optional *Packet Reference Manual* tells how to create, store, and download the data necessary to print batches. You can also use the Monarch® MPCL™ Toolbox utilities to create and download packets.



## Printing

Before you print, make sure the printer is connected and ready to receive data.

1. Turn on the printer. Your printer is ready to receive and print batches when you see

PRINT MODE  
Ready

2. Download a format and a batch. Refer to the optional *Packet Reference Manual* for information on downloading print jobs.
3. The printer prints a strip of labels.
4. Remove the printed labels.

If the printer will be unused for extended periods of time, we recommend leaving the printhead unlatched.

An optional keypad is also available to enter offline batch data. The keypad must be purchased separately. If there are offline batches in the print queue, the offline batches print after the downloaded batches have printed.

## On-Demand Mode Printing

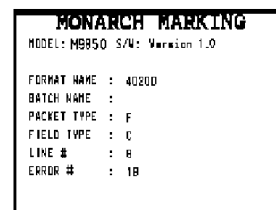
When the 9850 printer is operating in the on-demand mode, the next label prints when the previous label is removed from the printer or when **Feed/Cut** is pressed. The display shows "Printing X of Y" until all the labels in the batch are printed.

If you have purchased the optional peel module, you must use on-demand printing with peel mode. If you are using peel mode, remove the excess backing paper by pulling up across the saw-toothed tear edge. Make sure the backing paper tears at the edge. Hold the leading edge of peeled labels when printing on stock longer than six inches. The minimum feed length for peel mode is 1.5 inches. You must use non-perforated supplies for peel mode. The maximum speed for peel mode is 8.0 ips.

We recommend using 0.5-inch gap supplies in peel mode when backfeed is disabled.

## Printing an Error Label

If the printer displays a data error (errors 0-499), press **Feed** to print an error label and continue printing. See your System Administrator about the error label.

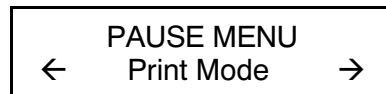


## Pausing a Batch

You can pause printing by pressing **Enter/Pause**. You may want to interrupt a batch to make adjustments for:

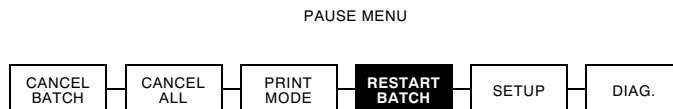
- ◆ Loading a different roll of supply or a ribbon. See Chapter 2, "Loading Supplies" or Chapter 3, "Loading Ribbon."
- ◆ Adjusting the supply position or contrast using the Setup menu. See Chapter 4, "Setting Supply Options."

When you press **Enter/Pause** you will see



You can press **Enter/Pause** to resume printing or press ⬅ or ➡ to display the Pause Menu options.

The following chart shows the Pause Menu options.



## Restarting a Batch

You can reprint a paused batch from the beginning (using the original quantity).

1. When you press **Enter/Pause**, you will see



2. Press  $\leftarrow$  or  $\rightarrow$  until you see

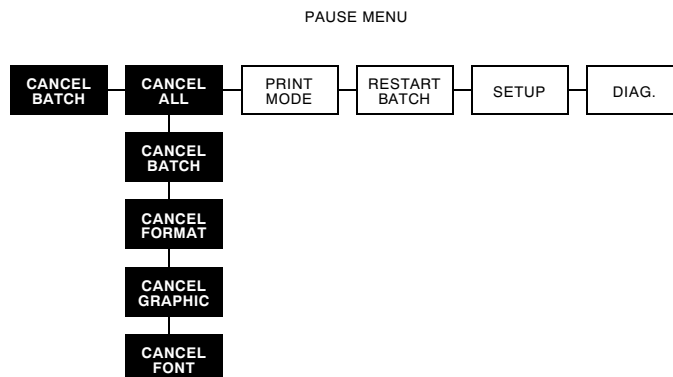


3. Press **Enter/Pause**. The batch starts printing from the beginning.

## Canceling a Paused Batch

You can cancel a paused batch, delete a format, graphic, or font in memory, or all the batches waiting to print.

Before any format, graphic, or font in memory can be deleted, you must cancel all batches.



You can cancel a batch by pressing **Escape/Clear** while the batch is printing, or you can use the Pause menu to cancel a batch.

1. Press **Enter/Pause** to interrupt printing. You will see



- ◆ If you want to cancel only the paused batch, skip step 3.
- ◆ If you want to cancel all the batches, skip step 2.
- 2. To cancel only the paused batch, press  $\ominus$  or  $\omin�$  until you see

PAUSE MENU Cancel Batch $\rightarrow$
--

Then press **Enter/Pause**. The batch is deleted and the printer prints any remaining batches.

- 3. To cancel all the batches (including the paused batch), press  $\ominus$  or  $\omin�$  until you see

PAUSE MENU $\leftarrow$ Cancel All $\rightarrow$
---

and press **Enter/Pause**. You will see

Cancel Batches? No $\rightarrow$
-------------------------------------

- 4. You can

- ◆ exit without canceling any batches. Press **Escape/Clear** or press  $\ominus$  to display **No** and then press **Enter/Pause**. The printer returns to the Pause menu. Press  $\ominus$  or  $\omin�$  to select another function from the Pause Menu, or to return to Print Mode and print all the batches.
- ◆ cancel all batches in the print queue. Press  $\omin�$  to display **Yes**, then press **Enter/Pause**. You will see

Cancel Format? No $\rightarrow$
------------------------------------

Press  $\omin�$  or  $\omin�$  then press **Enter/Pause**.

If password protection is enabled, you will be prompted to enter a password before the formats, graphics, and fonts are deleted. Press **Feed/Cut** three times and then press **Enter/Pause**.

All formats are deleted. If you enter the wrong password, you return to the Main menu. For more information about password protection, see "Using Password Protection" in Chapter 9. If password protection is disabled, you will see

Cancel Graphic? No →
-------------------------

Press ← or → then press **Enter/Pause**. You will see

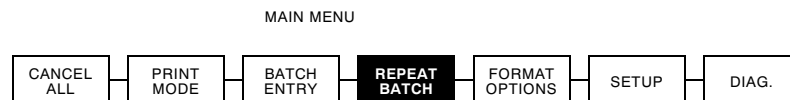
Cancel Font? No →
----------------------

Press →, then press **Enter/Pause**. You return to the Pause menu. **If you select "Yes," these prompts delete ALL formats, graphics, and/or fonts in the printer.**

5. Press ← or → to select another function from the Pause menu, or to return to Print mode.

## Repeating a Batch

Before you start printing a new batch, you can reprint the last batch. The batch can be either the last one you printed completely or one that you canceled after starting to print.



1. From the Main Menu, press ⬅ or ➡ until you see

←	MAIN MENU Repeat Batch	→
---	---------------------------	---

2. Press **Enter/Pause**. You will see

Printing xxxx of xxxx
--------------------------

The number increments until the entire batch has printed. When it is finished, you will see

PRINT MODE Ready
---------------------

## Offline Printing

---

Offline printing requires the optional keypad, which must be purchased separately.

### Entering a Batch

Batch Entry requires the optional keypad, which must be purchased separately.

## Special Printing Considerations

Keep in mind the following special printing considerations.

Maximum Print Speed	Printing Method	Printhead Density	Knife	Peel Mode
2.5/4.0/6.0 ips (inches per second)	Thermal Direct Thermal Transfer	203/300 dpi dots per inch	Supported	Supported
8.0 ips*	Thermal Direct Thermal Transfer	203 dpi only	Not Supported	Supported
10.0 ips	Thermal Direct	203 dpi only with continuous mode	Not Supported	Not Supported

- \* The maximum print speed with the optional 300 dpi printhead is 6.0 ips. 8.0 ips and 10 ips printing is available using thermal transfer supplies with the 203 dpi printhead.
- ◆ Premium supplies are recommended for 300 dpi applications. Premium supplies are coated paper or synthetic tags and PM255 ribbon. The part number for the ribbon is 119052xx, where xx is the ribbon size. For example, 11905213 is the part number for a PM255 1.3-inch ribbon.
- ◆ 94x5 emulation is not supported using 300 dpi.
- ◆ The maximum supply and image length with the optional 300 dpi printhead is 12.0 inches (305 mm).
- ◆ The recommended print speed using the optional verifier is 6.0 inches per second (152 mm).



## Printing TrueType® Fonts

---

TrueType® fonts are available on the 9850 printer. TrueType fonts are scalable and the characters print smoothly, without the jagged edges you see on bitmap fonts. When downloading a TrueType font, you download the entire font. You cannot specify a subset (particular characters or point size) of the font.

---

These font files may be very large and image slower than bitmap fonts. The size of the font file, in bytes, is the minimum amount of memory you must have available for fonts in the printer's memory.

---

Your System Administrator may need to reconfigure the printer's memory to use downloaded TrueType fonts. Refer to the optional *Packet Reference Manual* (available on our Web site) to learn how to reconfigure the printer's memory. After reconfiguring memory, resend the font, format, and batch packets.

The 9850 printer can accept a TrueType font file that has been converted to Hex or Run-Length encoding using the version of Font Utility. Font Utility is available on our Web site ([www.monarch.com](http://www.monarch.com)). Font Utility is a part of the Monarch MPCCL Toolbox Utilities. You can also use a wide variety of Code Pages with International (Turkish, Latin, Spanish, etc.) characters. Using TrueType fonts allows you a greater range of fonts for your formats. TrueType fonts are designed to be regionally specific; therefore, all Code Pages may not be supported in a given font. Check with your System Administrator if you need to use TrueType fonts.

## **Licensing Your Fonts**

---

Monarch provides the Font Utility to help you create and download international code pages/characters. However, it is your responsibility to license the fonts you purchase and download to your Monarch printer. Contact your font supplier for licensing information.

Additional fonts that are compatible with the 9850 printer can be purchased from:

The Electronic Font Foundry  
11 Silwood Road  
Ascot  
SL5 0PY  
England  
(0)1344 875 201  
[www.eff.co.uk](http://www.eff.co.uk)

# CARE AND MAINTENANCE

## 8

This chapter tells you how to

- ◆ clear label jams and clean the printhead and platen roller
- ◆ replace a printhead
- ◆ adjust print contrast.

### CAUTION

Do not use sharp objects to clean the printhead. This may damage the printer and require a service charge.

## Clearing Label Jams

When you are printing and a jam occurs, the **Fault** light on the printer's front panel blinks. To clear the jam:

1. Turn off the printer and open the cover and printhead assembly.
2. If necessary, remove the label roll and ribbon.
3. Remove the jammed labels and reload the label roll.
4. Close the printhead assembly and turn on the printer.
5. Press **Feed/Cut** to position the supply under the printhead.

## Cleaning

The rate and frequency at which you print determines how often you must clean the printer. You may need to clean the printhead, sensor, and platen roller:

- ◆ if there is any adhesive build-up in the supply path.
- ◆ after printing approximately 3 rolls of thermal transfer/thermal direct/linerless supplies or after each ribbon.

- ◆ daily if your printer is in an excessively dirty, hot, or humid environment.
- ◆ when you see voids or streaking in the print as shown.
- ◆ When you are using higher speeds (with 203 or 300 dpi), and/or increased print contrast, we recommend cleaning the printhead after each ribbon with isopropyl alcohol. If you still notice build-up on the printhead or black streaks on your supply, use the enclosed printhead CLEAN-STRIP.



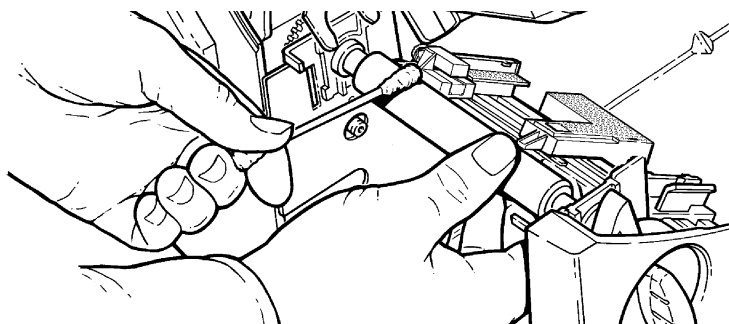
**Voids**



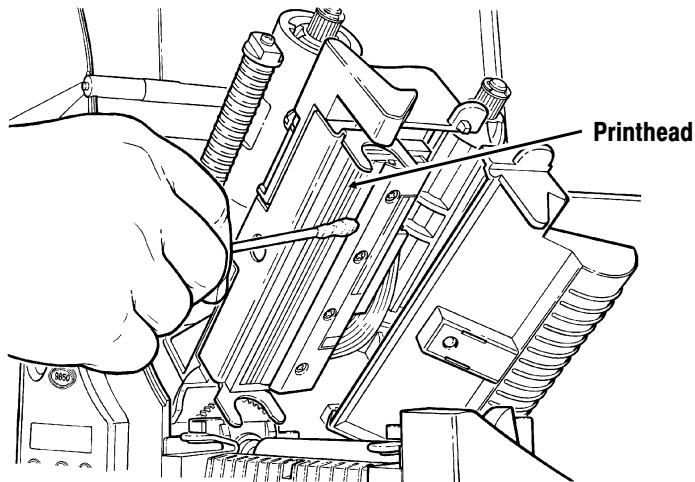
**Streaks**

You may have to clean the supply sensor more often if you frequently receive supply error codes.

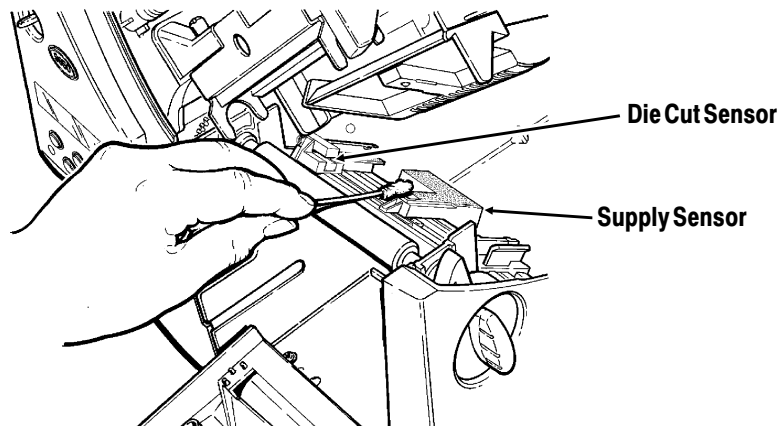
1. Turn off the printer and open the cover and printhead assembly.
2. Remove the label roll and ribbon (when cleaning the printhead).
3. Press down on the exit cover tabs to open the exit cover on the front of the printer.
4. Clean the platen roller with a dry cloth or small brush. However, if there is adhesive gum build-up on the platen roller, moisten a cotton swab with isopropyl alcohol. Turn the platen roller with your finger and run the cotton swab or dry cloth across it. Make sure the platen roller is clean all the way around.



5. Rub the cotton swab across the peel bar and remove any build-up.
6. Moisten another cotton swab with isopropyl alcohol. Rub the cotton swab across the printhead and remove any build-up. You may need to use a printhead CLEAN-STRIP if the printhead is extremely dirty or you see streaks on the supply.

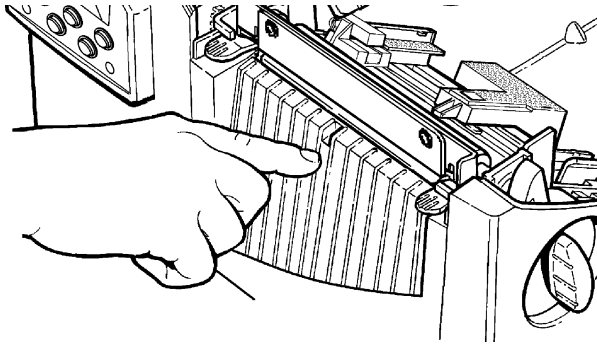


7. Rub the cotton swab across the supply sensor and die cut sensor and remove any build-up.



8. Clean the build-up in the supply path.

9. Let the printer dry before you reload supplies.
10. Close the exit cover by pushing firmly on it. Both latches will click into place.



11. Close the cover and printhead assembly.
12. Turn on the printer.
13. Press **Feed/Cut** to position the supply under the printhead. Resend your format, batch, and check digit packets.

## **Replacing the Printhead**

---

You may have to replace the printhead if it is damaged or worn-out. For example, you may see 616 (bad dot or dots) or 768 (printhead failure) error codes. See "Accessories" in Appendix B for the printhead part number.

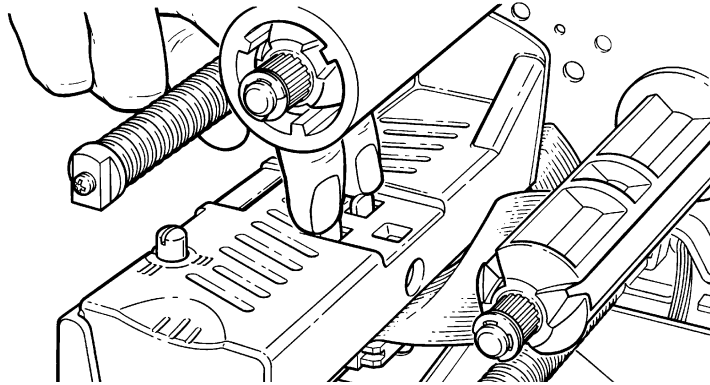
### **CAUTION**

The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching some metal, such as the printer's metal base, before touching the printhead. Clean the printhead to remove any salt or oil left from handling prior to operation.

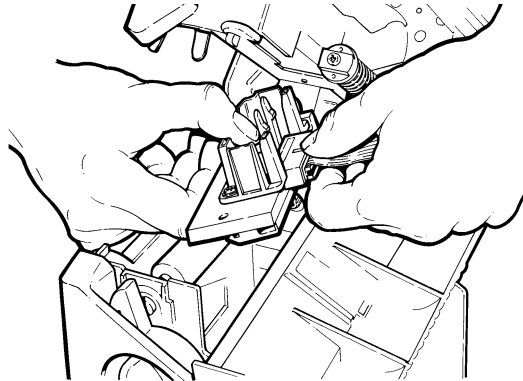
To replace the printhead:

1. Turn off the printer.
2. Open the cover.

3. Unlock the printhead by turning the retaining latch.
4. Press forward and down on the two latches on top of the printhead assembly as shown. The printhead will drop down.

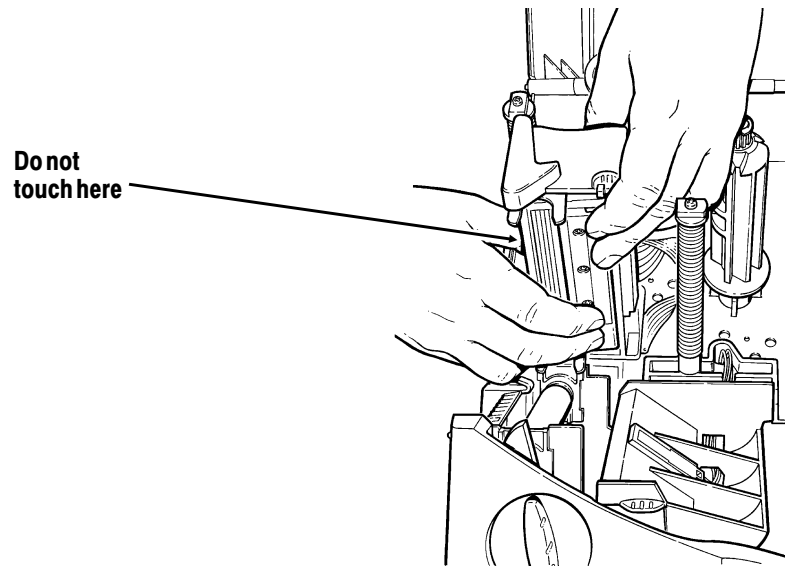


5. Lift the printhead assembly using the printhead tab and push back until the printhead assembly clicks into place.
6. Carefully unplug the cable from the printhead as shown. The printhead is sensitive to static electricity, which can damage the printhead or reduce its life. Ground yourself by touching some metal, such as the printer's metal base, before touching the printhead.
7. Carefully plug the cable into the new printhead.



8. Align the new printhead with the tabs.

9. Snap the printhead into place.



Make sure the printhead cable does not touch  
the ribbon roll.

10. Clean the new printhead with a cotton swab dipped in isopropyl alcohol to remove any salt or oil left from handling.
11. Let the printhead dry and reload your supplies.
12. Close the printhead assembly and the cover. Turn on the printer.
13. Press **Feed/Cut** to position the supply under the printhead.

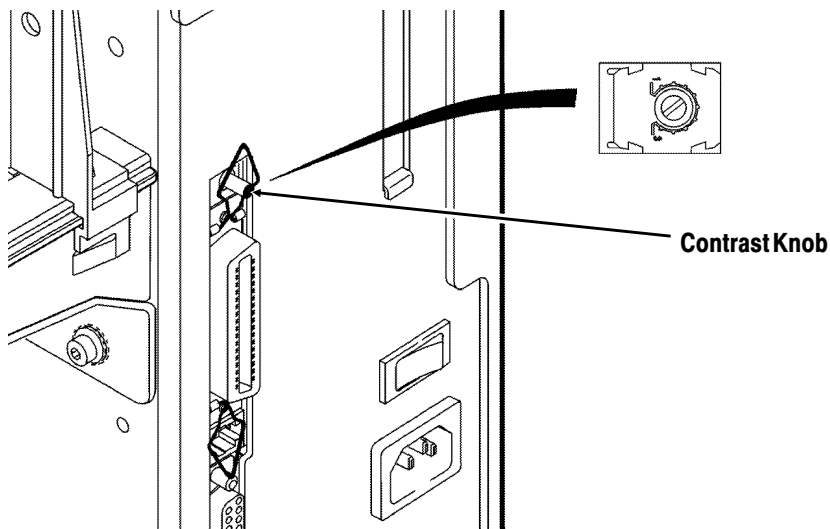


## Adjusting the Print Contrast

---

You may need to adjust the print contrast if the printing is too light or too dark. You may need to increase the print contrast for linerless supplies. Having the correct print contrast is important because it affects how well your bar codes scan and how long your printhead lasts.

Using a thin screwdriver, turn contrast knob clockwise for darker print; turn counter-clockwise for lighter print.



---

You only have to turn the contrast  
adjuster slightly.  
If you set the contrast online, this contrast  
setting is added to it.

---

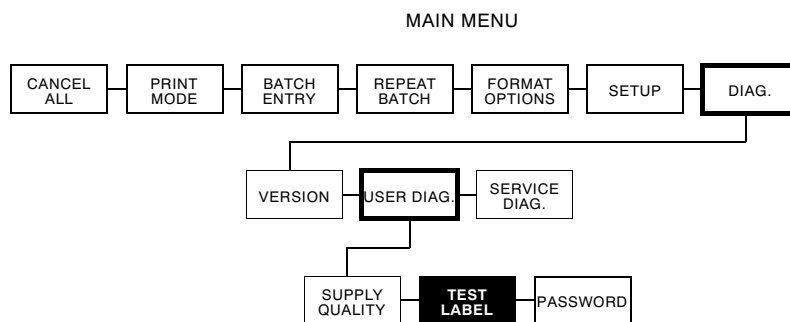
You can also adjust the contrast online. See "Setting Contrast" in Chapter 4. Your System Administrator can adjust the print contrast by sending the print control packet. Refer to the optional *Packet Reference Manual* for more information. We recommend you check the bar code print quality with a bar code verifier. If you do not have a bar code verifier or scanner, check the bar code visually. A bar code that is in spec has complete bars, clear spaces, and small alphanumeric characters look complete. An in spec bar code may not look as good as one that is too dark, but it has the highest scan rate.



# DIAGNOSTICS

## 9

This chapter explains how to perform simple diagnostic functions such as checking the software version, the supply quality, printing test labels, and using password protection.



## Factory Set Password

You need a password to access diagnostic functions. Press **Feed/Cut** three times and then press **Enter/Pause**.

## Checking the Software Version

From the Diagnostics Menu, press  $\leftarrow$  or  $\rightarrow$  until you see

DIAGNOSTICS  
Version    $\rightarrow$

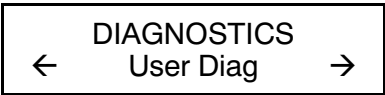
Press **Enter/Pause**. You will see

Model M9850  
V 1.0

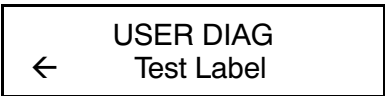
Line one lists the printer model number (M9850) and line two gives the version of software in the printer.

## Printing a Test Label

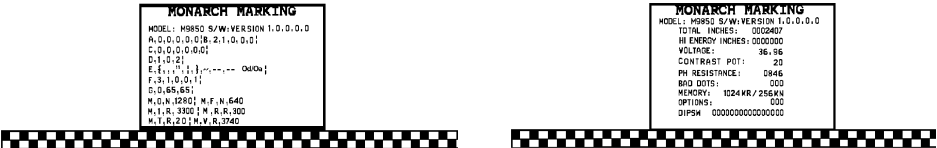
1. From the Diagnostics Menu, press  $\leftarrow$  or  $\rightarrow$  until you see



2. Press **Enter/Pause** and  $\leftarrow$  until you see



3. Press **Enter/Pause**. The following test labels print.



The first label shows the printer's configuration by packet (A-G). The second label shows the model number, software version, stock count, voltage, print contrast, printhead resistance, number of bad dots, and installed options. The test label also shows an inch count for the high energy ribbon. This information will help Technical Support diagnose the problem. Refer to the optional *Packet Reference Manual* for more information about the test label.

You can also print a test label by pressing  $\leftarrow$  and  $\rightarrow$  at the same time. Hold for one second and release. If test labels do not print, call Technical Support.

## Checking Supply Quality

The printer continuously stores data from the most recent 16 supplies printed to check the reflectivity of the sensor marks on the supply. Before you check your supply quality, print a batch of supplies or test labels.

1. From the Diagnostics menu, press  $\leftarrow$  or  $\rightarrow$  until you see

DIAGNOSTICS		
$\leftarrow$	User Diag	$\rightarrow$

2. Press **Enter/Pause**. You will be at the User Diagnostics menu. Press  $\leftarrow$  or  $\rightarrow$  until you see

USER DIAG		
	Supply Quality	$\rightarrow$

3. Press **Enter/Pause**. If you have not printed any labels, the message "No data! Press Enter" appears. You will also see the "No data! Press Enter" message if you are using continuous (non-indexed) supplies.  
If you have printed labels since turning on the printer, you will see

Len	Min	Max	OK
$\leftarrow$ 1568	034	124	Y $\rightarrow$

The Len listing is the length of the loaded supply in dots.

The Max listing should always be greater than the Min listing.  
The OK listing tells whether the sense mark on the supply passed a detection test. Press  $\leftarrow$  or  $\rightarrow$  to see the other readings.

## Using Password Protection

The password protection feature prevents formats, graphics or fonts from accidentally being deleted from the printer's memory.

### Enabling the Password (System Administrators only)

A System Administrator can enable the password that must be entered before formats, graphics or fonts can be deleted.

1. From the Main Menu, press  $\leftarrow$  or  $\rightarrow$  until you see

MAIN MENU  
 $\leftarrow$  Diagnostics

2. Press **Enter/Pause**. You will see

Enter Password  
-----

3. Enter the password: press **Feed/Cut** three times and then press **Enter/Pause**.  
If you enter the wrong password, you return to the Main Menu.

4. From the Diagnostics Menu, press  $\leftarrow$  or  $\rightarrow$  until you see

DIAGNOSTICS  
 $\leftarrow$  User Diag

5. Press **Enter/Pause**. Then, press  $\leftarrow$  or  $\rightarrow$  until you see

USER DIAG  
 $\leftarrow$  Password

6. Press **Enter/Pause**. You will see

Enable Password?  
 $\leftarrow$  No

The default for password protection is "No," so you will always see "No" even if passwords are enabled.

7. If you do not want the user to enter a password before they can delete formats, graphics or fonts, press **Enter/Pause**. You return to the User Diagnostics Menu.

**OR**

Press → to display "Yes" and press **Enter/Pause**. The password protection is enabled for formats, graphics or fonts. You return to the User Diagnostics Menu.

8. Press **Escape/Clear** twice to exit to the Main Menu.

## **Service Diagnostics**

---

The Service Diagnostics menu can only be accessed by a Monarch Representative, because it requires a separate password. If you need to call Technical Support, print a test label first.





# TROUBLESHOOTING

**10**

This chapter provides solutions to minor printing problems and explanations of common error messages you may receive while using the printer.

## Troubleshooting

This section helps you correct some problems that may occur.

Problem	Action
Error message appears during startup.	Turn off the printer, wait fifteen seconds and then turn on the printer. Call Technical Support if the error message reappears.
Does not print.	Check supply. Check ribbon. Send a corrected format and batch packet.
Does not feed.	Set wide/narrow knobs correctly.
Partially printed data.	Clean the printhead. Send a corrected format packet.
Printing shadows or smears.	Clean the printhead. Change supply. Check ribbon.
Light printing.	Change supply. Adjust the print contrast. Check wide/narrow knobs. Check ribbon.
Heavy printing.	Clean the printhead. Change supply. Adjust the print contrast. Check wide/narrow knobs. Check ribbon.
Voids in printing.	Clean the printhead. Change supply type. Check ribbon.
Serial bar codes do not scan.	Leave printhead unlatched when not in use. Use a print speed of 2.5 IPS. Adjust the print contrast.

Problem	Action
Backing paper is wrapped around platen or peel roller.	Carefully remove the backing paper. Make sure the backing paper tears at the saw-toothed tear edge when using backfeed and peel mode.
Blank labels print or 750 series errors.	Clean supply sensors.

If you cannot fix a problem, call Technical Support.

## Error Messages

You may receive the following types of error messages:

- ◆ Data Errors
- ◆ Communication Errors

Some errors numbered 400-438 and 500-574 are internal software errors. Errors numbered 900-999 are hard printer failures. If you cannot clear an error, turn off the printer, wait several seconds and then turn on the printer. For a complete list of errors, refer to the optional *Packet Reference Manual* available on Monarch's Web site. Call Technical Support if you need additional assistance.

## Common Errors

Errors 001 to 405 and 429 to 435 are data errors. This type of error indicates that incorrect data was sent to the printer, and the printer is ignoring it. Your System Administrator should correct the packet and send it back to the printer.

Error	Description/Action
002	Name must be 1 to 8 characters inside quotes.
005	Supply width is invalid.

- 018 Code page selection defined in the field must be **0** (Internal), **1** (ANSI), **2** (DOS 437), or **3** (DOS 850).
- 025 Data length is too long.
- 101 Format referenced by batch not in memory.
- 400 Invalid character following {.
- 403 Field separator was not found.
- 409 Printer memory is full. Delete unnecessary formats or graphics from memory.
- 410 Parity mismatch.
- 411 Framing error (baud rate mismatch).
- 412 Flow control mismatch.
- 413 Online receive buffer is full. Check for a flow control problem.
- 611 Font, bar code, or density in the batch does not fit the format.
- 612 The data in this line of the batch is either missing or does not match the format.
- 613 Reference point off supply.
- 614 Portion of field off supply or there may be an invalid character in the packet.
- 703 The printer sensed a calibration of different-sized black marks. Make sure the correct supply type is loaded.
- 704 Printer has not sensed a supply mark within the specified number of inches or is out of supplies. Check the supply tracking, supply marks, black mark sensor position, and supply roll for binding. Press **Escape/Clear** and try to continue printing. Change supply.

#### 10-4 Troubleshooting

- 750 Printhead is overheated. Turn off the printer.
- 751 Printer did not sense a black mark when expected. For errors 751-753, check the supply tracking, supply marks, black mark sensor position, and supply roll for binding. Press **Escape/Clear** and try to continue printing. Change supply.
- 752 Printer sensed a mark in the wrong place.
- 753 Printer sensed a mark that is too long.
- 754 Check for a ribbon jam or remove any slack in the ribbon by turning the take-up reel clockwise. Load a new ribbon.
- 755 Printhead is open. Close the printhead.
- 756 Load supplies.
- 757 Load supplies (supply length mismatch), because the calibrated supply length differs by plus or minus .25 inches from the format. Press **Feed/Cut**.
- 758 Either the supply is not seen or the on-demand sensor is broken. Check for a label jam, clear the supply path, or reload supplies. This error may occur if you remove a label too quickly in the on-demand mode.
- 763 Waiting to dispense label. Press **Feed/Cut**.
- 765 The printhead has less than 4 bad dots. The printer can shift bar code fields to avoid bad dots. You may need to press **Escape/Clear** to continue printing. Print a test label to confirm the number of bad dots.
- 768 Printhead has more than 10 bad dots or is not connected. Connect the printhead.
- 791 The printer has an error pending. Turn off the printer. Wait 15 seconds (until the power light is completely dim) and turn it back on. Resend the packets.



# SPECIFICATIONS

A

## Printer

---

<b>Height:</b>	12.5 inches (318 mm)
<b>Width:</b>	12 inches (305 mm)
<b>Depth:</b>	13 inches (330 mm)
<b>with the optional metal cover (H x W x D)</b>	13.0" (330 mm) x 12.5" (318 mm) x 17.3" (439 mm)
<b>Weight:</b>	21 lb. (9.5 kg)
<b>Weight w/metal cover:</b>	29 lb. (13.2 kg)
<b>Shipping Weight:</b>	25 lb. (11.4 kg)
<b>Shipping Weight w/metal cover:</b>	34 lb. (15.5 kg)
<b>Power:</b>	115 Vac, 60Hz, 100 Vac, 50/60 Hz, 230 Vac, 50Hz
<b>Operating Limits:</b>	For Thermal Transfer (ribbon) 40° to 95° F (4° to 35° C) For Thermal Direct 40° to 104° F (4° to 40° C)
<b>Printhead:</b>	Thermal at 4 inches (102 mm) wide 203 dpi (8.0 dots per mm) <b>OR</b> 300 dpi (11.8 dots per mm) This option must be purchased separately.

<b>Print Speed:</b>	2.5 ips (64 mm) default for all serial bar codes, 4.0 ips (102 mm), 6.0 ips (152 mm) default for parallel bar codes, 8.0 ips (203 mm), and 10.0 ips (254 mm) See Chapter 7, "Printing" for special considerations when printing at speeds greater than 6.0 ips.
<b>Printing Method:</b>	Thermal Transfer (ribbon) or Thermal Direct
<b>Maximum Print Area</b>	4.0 inches x 16.0 inches (102 mm x 406 mm) with 203 dpi 4.0 inches x 13.0 inches (102 mm x 3330 mm) with 300 dpi

## Supplies

---

For high temperature or high humidity environments, contact Monarch for supply recommendations. Continuous (non-indexed) supply does not have perforations or black marks and must be used in continuous mode. We recommend using continuous supply with a tear bar or the optional knife. If you purchased the optional knife, you cannot use the tear bar. Aperture supplies are tags or labels with holes (or openings) in them. The supply is sensed using the holes. The holes can be only on the edge or in the center of the supply.

<b>Supply Types:</b>	Thermal Transfer or Direct
<b>Supply Widths:</b>	.75 inches (19 mm) minimum 4.00 inches (102 mm) maximum
<b>Supply Lengths:</b>	.32 inch (8 mm) minimum 17.5 inches (445 mm) maximum



### **Linerless Supplies**

<b>For Supply Width greater than or equal to</b>	<b>Use Supply Length</b>
1.5" (38 mm)	1.5" to 16" (38 mm to 406 mm)
2.0" (51 mm)	1.5" to 16" (38 mm to 406 mm)
3.0" (76 mm)	2.0" to 16" (51 mm to 406 mm)
4.0" (102 mm)	2.5" to 16" (64 mm to 406 mm)

A 0.50 inch non-print zone exists on the leading edge (beginning) of all labels.

### **Ribbon Specification**

Do not leave ribbon in sunlight, high temperatures or humidity.

**Ribbon Type:** Standard or High Energy

<b>Ribbon Widths</b>	<b>Use with Max. supply width</b>
1.5" (38 mm)	1.3" (33 mm)
1.8" (46 mm)	1.5" (38 mm)
2.3" (58 mm) standard or high energy	2.0" (51 mm)
3.3" (84 mm)	3.0" (76 mm)
4.3" (110 mm) standard or high energy	4.0" (102 mm)

**Ribbon Length:** 23,600 inches (600 meters)

## About Ribbons

The width of the ribbon must be greater than the supply width. Since some supplies are more abrasive to printheads than others, using a ribbon wider than your supply helps protect the printhead. Replacement printheads are expensive.

## Cable Pinouts

The following tables show the connector pins for a 9-pin to 25-pin (118364) cable or a 25-pin to 25-pin cable (118366).

9-Pin (F)	To	25-Pin (M)
CD 1	←	20 DTR
RD 2	←	2 TD
TD 3	→	3 RD
DTR 4	→	8 CD
SGND 5	→	7 SGND
DSR 6	←	6 DSR
RTS 7	→	4 RTS
CTS 8	←	5 CTS
N/C 9	→	1 Shield Drain Wire

25-Pin (F)	To	25-Pin (M)
FG 1	→	1 FS
TD 2	→	2 TD
RD 3	←	3 RD
RTS 4	→	4 RTS
CTS 5	←	5 CTS
DSR 6	←	6 DSR
SG 7	→	7 SG
CD 8	←	8 CD
N/C 20	→	20 DTR

# ACCESSORIES & OPTIONS

**B**

## **Accessories**

---

- ◆ 917™ Keypad
- ◆ 918™ Verifier
- ◆ 926™ Knife
- ◆ 928™ Stacker
- ◆ Replacement Printhead (120551)
- ◆ High Energy Supplies (TUFFMARK®)
- ◆ Ribbon Take-Up Core (11796120, 30, or 40; available in 2", 3", or 4" widths)
- ◆ Monarch® MPCL™ Toolbox (utilities to configure the printer, download fonts, and design formats)  
Available on Monarch's Web site ([www.monarch.com](http://www.monarch.com))
- ◆ External LAN Print Server Supports Ethernet and TCP/IP:  
RJ-45 Connector (10BaseT) 11753101  
BNC Connector (10Base2) 11753102
- ◆ External Ethernet Print Server supports TCP/IP (11753105)
- ◆ Printhead CLEAN-STRIP (120350)
- ◆ Printhead Cleaning Pen (114266)
- ◆ Cables: 9-pin to 25-pin (118364), 25-pin to 25-pin (118366)

—————  
You can use either the optional knife or peel mode,  
but not both.  
—————

## Factory-Installed Options

---

- ◆ 300 dpi printhead (120552)
- ◆ Internal TwinAx/CoAx Protocol Converter (117532)  
also Service-installable)
- ◆ Internal Ethernet Print Server supports TCP/IP (11753104)
- ◆ Peel mode with on-demand sensor
- ◆ Tear Bar
- ◆ Metal Cover
- ◆ Knife-ready (order 926 Knife separately)

## Ethernet Information

Monarch® offers internal and external Ethernet connectivity solutions. These solutions make it easy to set up, manage, and monitor a Monarch 9850 printer linked to an Ethernet connection. The print server provides multiprotocol capabilities for users with Windows® 95/98/2000 or Windows NT®, TCP/IP, and NetWare®. Software is available on Monarch's Web site ([www.monarch.com](http://www.monarch.com)) to configure the print server or you can order part number TC9840ENCD for the MonarchNet™ Utilities compact disc. It can also be configured using HP Jet Admin™ or HP Web JetAdmin™ software.

Configuration information prints automatically if the Ethernet print server senses a hardware error. To print configuration information on demand, press the *Test* button on the side of the external Ethernet print server unit or use the configuration utility provided for your network operating system. The configuration label prints in MPCL format.

---

The configuration label is best displayed using 4" wide by 6" long labels. If the label is too small, some information may print outside the label edges.

---

# GLOSSARY

The following terms will help you use this manual.

<b>continuous mode</b>	Mode in which the printer prints all the labels in the batch without stopping.
<b>download (send)</b>	Transmission of data from the host to your printer.
<b>format</b>	Supply layout or design, which the <i>System Administrator</i> downloads as a format packet to your printer.
<b>host</b>	Any mainframe, minicomputer, data collect terminal, or personal computer sending data to the printer.
<b>LCD</b>	Display on the printer used to indicate printer conditions and problems.
<b>MONARCH leader</b>	Wrap around a new roll of ribbon with Monarch printed on it.
<b>on-demand mode</b>	Mode in which the printer stops after each label to allow you to remove it.
<b>print job</b>	Actual data printed on a label or tag. The host may download the print job together with the format, or as a separate packet. The print job is also called a "batch."
<b>online</b>	Direct communication between a computer and the printer.
<b>Supply Sensor</b>	Senses whether supply is loaded or needs to be loaded in the printer. Located in the supply path.
<b>Supplies</b>	Labels used for printing.
<b>System Administrator</b>	Person responsible for creating and downloading packets.



# INDEX

---

## A

---

about fonts 7-9  
accessories B-1  
adjusting  
    margin position 4-7  
    print contrast 8-7  
    print position 4-4  
    supply position 4-6  
    supply width 2-13

---

## B

---

backfeed 4-11  
batch  
    canceling 7-3  
    entering 7-7  
    interrupting 7-3  
    repeating 7-6  
    reprinting 7-3  
    restarting 7-3  
baud rate 5-1  
    options 5-2

---

## C

---

cancel  
    batch 7-3  
    paused batch 7-4  
checking  
    print 9-2  
    software version 9-1  
cleaning  
    peel bar 8-2  
    platen roller 8-2  
    printhead 8-2  
    supply sensor 8-3  
cleaning printer 8-1

clearing jams 8-1  
common  
    errors 10-3  
communication  
    errors 10-3  
communication parameters  
    baud rate 5-1  
    parity 5-1  
    resetting 5-5  
    start (Xon) character 5-1  
    stop (Xoff) character 5-1  
    stop bits 5-1  
    word length 5-1  
communications  
    parallel 5-5  
contrast  
    adjusting print 8-7  
    setting 4-13  
currency 6-2

---

## D

---

data entry mode 7-7  
decimal places  
    defining 6-4  
default  
    port settings 5-1, 5-6  
    values 5-1, 5-6  
defaults  
    printer 6-1, 6-5 - 6-6  
documentation  
    ordering 1-2

---

## E

---

emulating 9445 1-2  
entering a batch 7-7  
error label, printing 7-2

errors  
    common 10-3  
    communication 10-3  
    summary of types 10-3  
ethernet B-2  
exiting an option 1-7

---

## F

---

flow control  
    options 5-4  
function, selecting 1-6

---

## H

---

high energy ribbon 3-4

---

## I

---

IEEE-1284 5-5  
information  
    Ethernet B-2  
    printing 7-8

---

## J

---

jams, clearing 8-1

---

## L

---

label specifications A-2  
labels  
    adjusting for width 2-13  
    clearing jams 8-1  
    linerless 2-8  
    test print 9-2  
linerless labels 2-8  
linerless supply  
    specifications A-3  
loading, ribbon 3-2  
locating  
    supply sensor 8-3

---

## M

---

maintenance  
    cleaning printer 8-1  
margin  
    adjusting 4-7  
mode  
    data entry 7-7  
    offline 7-7  
    online 7-1  
monetary sign, defining 6-2

---

## O

---

offline mode 7-7  
on-demand printing 7-2  
online  
    mode 7-1  
option  
    selecting 1-6  
options B-1  
    baud rate 5-2  
    flow control 5-4  
    parity 5-4  
    word length 5-2

---

## P

---

parallel  
    communications 5-5  
parity 5-1  
    options 5-4  
passwords  
    setting 9-1  
paused batch  
    cancel 7-4  
pausing  
    batch 7-3  
peel bar  
    cleaning 8-2  
platen roller  
    cleaning 8-2



- port settings 5-1, 5-6
- power-up mode
  - defining 6-6 - 6-7
- print
  - adjusting position 4-4
  - batch separators 4-3
  - offline mode 7-7
  - online mode 7-1
  - setting contrast 4-13
- print speed 4-10
- print, adjusting darkness 8-7
- printer
  - 9445 emulation 1-2
  - buttons 1-4
  - checking status 1-4
  - cleaning 8-1
  - defaults 4-4, 4-9 - 4-11, 6-1 - 6-7
  - establishing communication 1-3
  - features 1-1
  - lights 1-4
  - operating specifications A-1
  - physical specifications A-1
  - ribbon default 4-2
  - unpacking 1-2
- printer accessories B-1
- printer options B-2
- printhead
  - cleaning 8-2
- printhead replacement 8-4
- printing
  - considerations 7-8
  - error label 7-2
  - information 7-8
  - on-demand 7-2
  - TrueType fonts 7-9

## R

- resetting
  - communications parameters 5-5
- ribbon 4-2
  - high energy 3-4
  - loading 3-2
  - supply options 4-2
- ribbon specifications A-3

## S

- secondary sign
  - using 6-3
- selecting a function 1-6
- sensor
  - supply 8-3
- separating multiple batches 4-3
- separators
  - supply options 4-3
- setting
  - communication parameters 5-1
  - contrast 4-13
  - print contrast 4-13
  - supply options 4-1
- slashed zero
  - defining 6-5
- software version 9-1
- specification
  - operating A-1
- specifications
  - linerless supply A-3
  - physical A-1
  - ribbon A-3
  - supplies A-2
- start (XON) character 5-1
- stop (XOFF) character 5-1
- stop bits 5-1
- supply
  - adjusting position 4-6
  - adjusting print options 4-4
  - options 4-4, 4-9
  - position 4-6
  - print options 4-6
  - type 4-4, 4-9
- supply options
  - ribbon 4-2
  - separators 4-3
  - setting 4-1
- supply sensor 8-3
  - locating 8-3

---

## **T**

---

tag specifications A-2  
tear bar 2-7  
tear edge 2-6  
test labels  
    printing 9-2  
troubleshooting 10-2  
trueType fonts  
    printing 7-9

---

## **U**

---

using  
    verifier 4-12

---

## **V**

---

values  
    communication 5-1, 5-6  
    default 5-1, 5-6  
verifier  
    information 4-12  
version of software 9-1

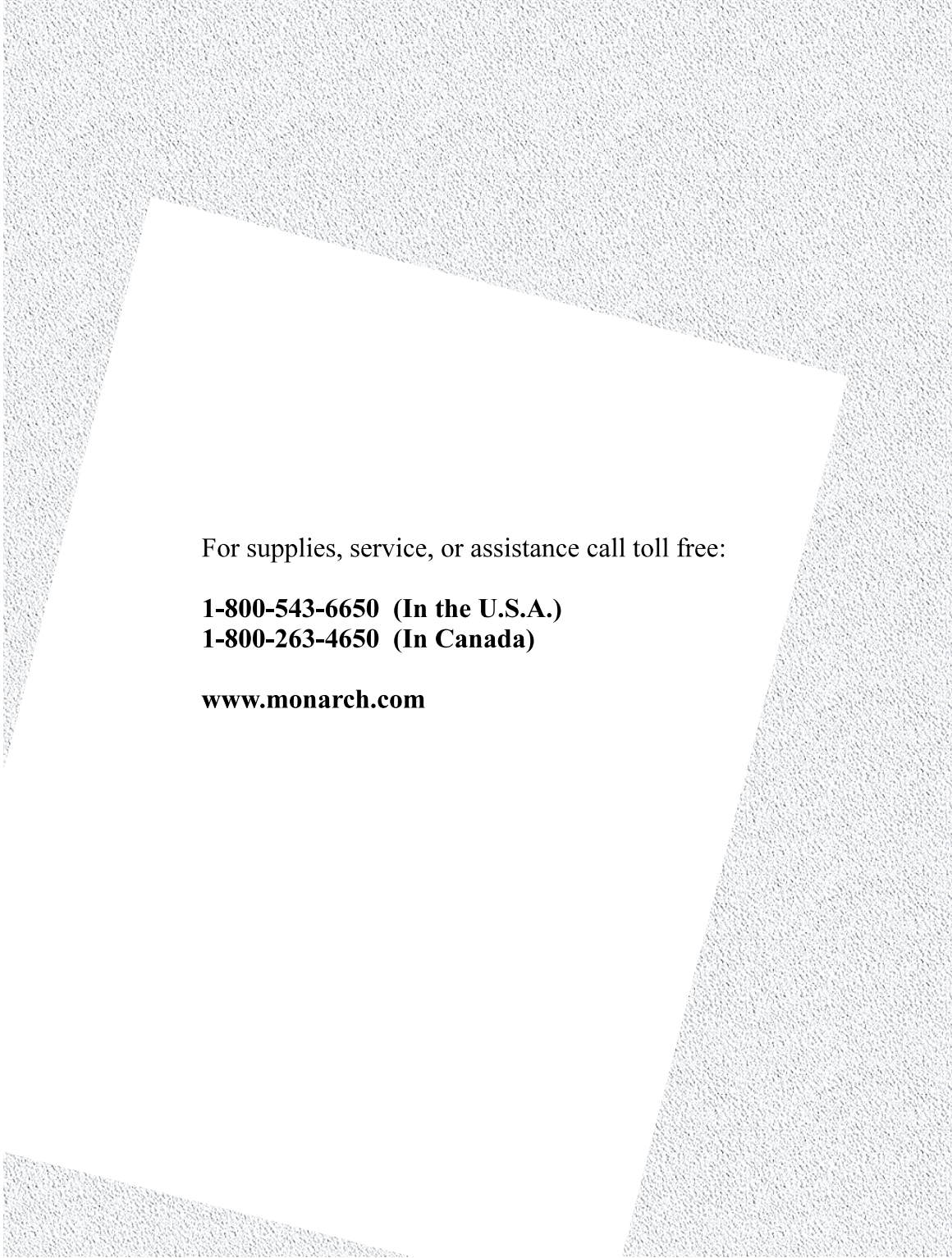
---

## **W**

---

word length 5-1  
    options 5-2





For supplies, service, or assistance call toll free:

**1-800-543-6650 (In the U.S.A.)**

**1-800-263-4650 (In Canada)**

**[www.monarch.com](http://www.monarch.com)**